HELIX
Environmental Planning

Valiano Project

Biological Technical Report

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PDS2013-STP-13-003, PDS2013-TM-5575,
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~~February 18, 2015~~ December 2015

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SUMMARY (ABSTRACT)

This biological technical report was prepared to evaluate the approximately 238.8-acre Valiano Project (hereinafter referred to as "Project" or "proposed Project") site. More than half of the Project site is in active agricultural use and the rest is vacant land with some rural development that is located in northern San Diego County, California. The entire site is within the North County Metro Segment of the Draft North County Subarea Plan, and the majority of the site is outside of any Pre-approved Mitigation Area (PAMA). A portion of the southeastern corner of the site is within draft preserve in the draft north County plan.

The proposed Project is comprised of a residential community with 326 single-family dwelling units (DUs) and related facilities within a total developed area of approximately 89.1~~92~~ acres. The residential development is divided into 5 distinct neighborhoods, with the neighborhood locations, associated lot configurations, minimum and average lot sizes, DUs, and grading limits. The proposed development also incorporates a number of related amenities and facilities as outlined below, including a community recreation center, public neighborhood park, internal road and trail system, an on-site wastewater treatment and water reclamation facility (WTWRF), and wet weather storage area. ~~In addition, an existing 15,000 s.f. barn complex located in the proposed public neighborhood park would be retained under the proposed Project design.~~

Rincon del Diablo Municipal Water District (Rincon MWD) owns a 3.2-acre future reservoir site within the northern portion of the proposed project site. This "R7 Reservoir" will be constructed in association with the proposed project. Access would be from the east off of Hill Valley Drive.

The property is comprised of 13 parcels (Assessor's Parcel Numbers [APNs] 232-013-01 through 232-013-03, 232-020-55, 232-492-01, 232-500-18 through 232-500-24, and 228-313-13) totaling approximately 238.8 acres of predominantly undeveloped land. The Project site is zoned Semi-Rural Residential, with up to 1 dwelling unit (DU) allowed either per acre (zoned SR-1) or per 2 acres (zoned SR-2), slope dependent, depending on the parcel.

Twenty-one vegetation communities or land uses (southern riparian forest, southern riparian woodland, southern willow scrub, mule fat scrub, freshwater marsh, herbaceous wetland, disturbed wetland, open water/pond, tamarisk scrub, coast live oak woodland, Diegan coastal sage scrub, southern mixed chaparral, eucalyptus forest, eucalyptus woodland, non-native grassland, non-native vegetation, orchard, intensive agriculture, extensive agriculture, disturbed habitat, and developed land) were mapped on site.

A total of 1.64 acres of Waters of the U.S. (WUS; U.S. Army Corps of Engineers [USACE] jurisdictional areas) is present on the Project site, including 0.45 acre of wetland WUS and 1.19 acres of non-wetland WUS. A total of 7.05 acres of California Department of Fish and Wildlife [CDFW] jurisdictional areas is present on the Project site. CDFW jurisdictional areas are comprised of 5.65 acres of wetlands/riparian habitat and 1.40 acres of open water and streambed. San Diego County Resource Protection Ordinance (RPO) wetlands on the Project site total 3.99 acres.

No sensitive plant species has been observed on site. Ten sensitive wildlife species have been detected on site: Cooper's hawk (*Accipiter cooperii*), grasshopper sparrow (*Ammodramus savannarum*), red-shouldered hawk (*Buteo lineatus*), turkey vulture (*Cathartes aura*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), prairie falcon (*Falco mexicanus*), southern mule deer (*Odocoileus hemionus fuliginata*), yellow warbler (*Setophaga petechia*), and western bluebird (*Sialia mexicana*).

The proposed Project would result in direct impacts to approximately ~~61.4~~59.5 acres of sensitive vegetation communities: ~~0.17 acre of southern riparian forest,~~ 0.04 acre of southern willow scrub, 0.01 acre of mule fat scrub, 0.02 acre of herbaceous wetland, 0.08 acre of disturbed wetland, 6.2~~7~~ acres of coast live oak woodland, 0.2~~1.0~~ acre of Diegan coastal sage scrub, 3.0~~1~~ acres of southern mixed chaparral, and 49.9~~53.8~~ acres of non-native grassland.

Project implementation would impact ~~0.21~~0.19 acre of WUS, comprised ~~of 0.02 acre of herbaceous wetland and~~ entirely of ~~0.19 acre of~~ non-wetland waters~~WUS~~. The proposed Project would affect 0.76~~0.92~~ acre of CDFW jurisdictional areas comprised of 0.50~~66~~ acre of wetland/riparian habitat (~~0.14 acre of southern riparian forest,~~ 0.3~~8~~9 acre of coast live oak woodland, 0.02 acre of southern willow scrub, ~~0.01 acre of mule fat scrub,~~ 0.02 acre of herbaceous wetland, and 0.08 acre of disturbed wetland) and 0.26 acre of streambed. The proposed Project would affect ~~0.18~~0.01 acre of County RPO wetlands comprised of ~~0.17 acre of southern riparian forest and 0.01 acre~~a single stand of mule fat scrub.

Impacts to ~~0.17 acre of southern riparian forest,~~ 0.04 acre of southern willow scrub, 0.01 acre of mule fat scrub, 0.02 acre of herbaceous wetland, and 0.08 acre of disturbed wetland will be mitigated at County of San Diego (County) ratios through purchase of wetland credits at the San Luis Rey Mitigation Bank, future Brook Forest Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.

Impacts to 6.2~~7~~ acres of coast live oak woodland, 0.2~~1.0~~ acre of Diegan coastal sage scrub, 3.0~~1~~ acres of southern mixed chaparral, and 49.9~~53.8~~ acres of non-native grassland will be mitigated at County ratios through one or more of the following: purchase of credits at the future Brook Forest Conservation Bank, or off-site acquisition and preservation of land within the NC MSCP PAMA boundaries, or other location deemed acceptable by the County and Wildlife Agencies.

Impacts to WUS, CDFW jurisdictional areas, and RPO wetlands will be mitigated at ratios ranging from 1:1 to ~~a minimum~~ 3:1 ~~ratio~~ through purchase of credits at the San Luis Rey Mitigation Bank, ~~and~~ future Brook Forest Mitigation Bank ~~(for CDFW coast live oak woodland)~~, or other location deemed acceptable by the County and Regulatory Agencies. Final mitigation requirements would be established through consultation with the USACE, CDFW, and County.

Implementation of the proposed mitigation measures (MMs) would reduce impacts to less than significant.

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

A biological resources study was conducted for the proposed Valiano Project (hereinafter referred to as "Project" or "proposed Project") to provide the 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 state, federal, and county regulations. This report describes the Project 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 within the Project site. In addition, Project impacts are assessed and mitigation is proposed to offset the proposed Project's unavoidable significant impacts to sensitive biological resources.

1.2 PROJECT LOCATION AND DESCRIPTION

1.2.1 Project Location

The approximately 238.8-acre Project site is comprised of 13 parcels (Assessor's Parcel Numbers APNs 232-013-01, -02, and -03; 232-020-55, 232-492-01, 232-500-18, -19, -20, -21, -22, -23, -24, and 228-313-13) located in northern San Diego County, California (Figure 1). The Project site located within unincorporated San Diego County. The Project site is located in Sections 18, 19, and 30, Township 12 South, Range 2 West of the U.S. Geological Survey (USGS) 7.5-minute Rancho Santa Fe quadrangle map (Figure 2). The site is situated approximately 4,500 feet south of State Route (SR) 78, south of Hill Valley Drive and west of Country Club Drive (Figure 3).

The site is within the North County Metro Segment of the Draft North County Multiple Species Conservation Program (NCMSCP) planning area (Figure 4).

1.2.2 Project Description

The proposed Project consists of a semi-rural residential community with 326 single-family dwelling units (DUs) and related facilities within a total developed area of approximately ~~92~~ 89.4 acres. The residential development is divided into 5 distinct neighborhoods, with the neighborhood locations, associated lot configurations, minimum and average lot sizes, DUs, and grading limits shown on Figure 5. The proposed development also incorporates a number of related amenities and facilities as outlined below, including a community recreation center, public neighborhood park, internal road and trail system, and an on-site wastewater treatment and water reclamation facility (WTWRF) and wet weather storage area. ~~In addition, an existing 15,000 s.f. barn complex located in the proposed public neighborhood park would be retained under the proposed Project design.~~ In addition, the Project includes a 3.2-acre parcel owned by the Rincon del Diablo Municipal Water District (Rincon MWD) located in the northern portion of the Project site. This future reservoir site, herein referred to as the R7 Reservoir, would be designed and constructed as part of the Proposed Project. The R7 Reservoir would be used to

increase fire flow capacity to enhance regional and area fire safety, as well as upgrading and improving the existing ID South service area to the new fire flow standard by providing increased available supply and pressure with the R7. Access to the R7 Reservoir site would be from the east off of Hill Valley Drive.

The Project includes both public and private recreational areas as well as preserved open space for biological and agricultural resources. Approximately ~~28.2~~31.2 acres (13.1~~11.8~~ percent) of the Project site would be protected within a biological open space easement. In addition, ~~36.5~~35.4 acres ~~(15.3 percent)~~ of existing on-site agricultural uses (avocado orchards) would be preserved in an agricultural easement in the northwestern portion of the site. The Project also includes a Limited Building Zone (LBZ) which states that no habitable or flammable structures may be constructed within 150 feet of biological open space areas, unless otherwise noted in the Fire Protection Plan. A 2.1~~4~~-acre Oak Tree Protection Easement would be recorded over the 2.1~~4~~ acres of coast live oak woodland remaining within the LBZ, which would limit fuel modification to clearing of the understory and prohibit the removal of mature oak trees.

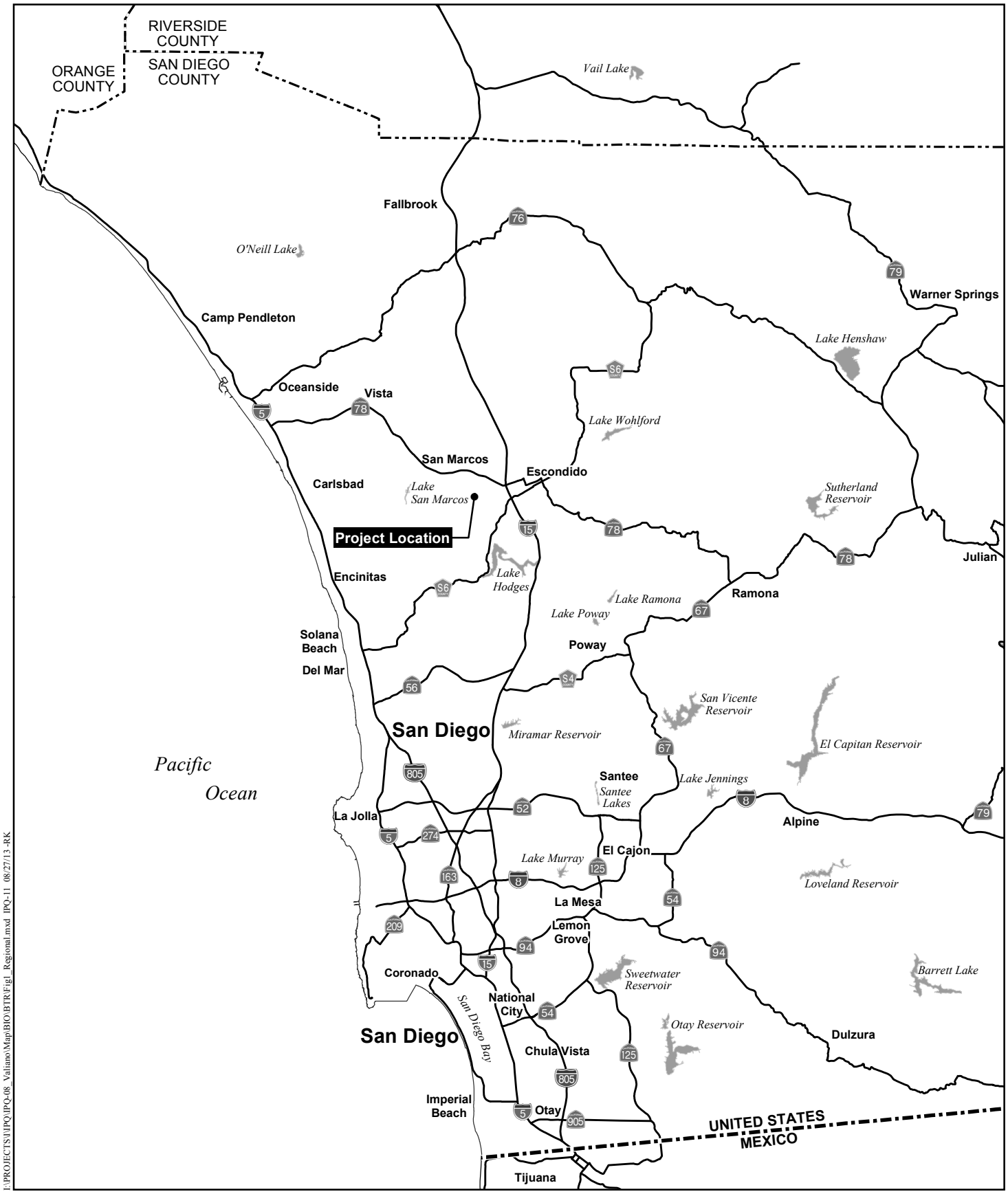
Wastewater generated by the proposed Project would be treated by an on-site WTWRF which would be owned and operated by the San Diego County Sanitation District. The WTWRF would be located on a 0.4~~-7~~ acre ~~site~~ lot in the southeastern-most portion of the property within Neighborhood 5. This facility would provide treatment of all wastewater generated on site, and would produce reclaimed effluent per applicable regulatory standards for irrigation of on-site landscaping. In addition, a 1.6-acre wet weather storage area would be located north of Neighborhood 5 to provide storage for excess treated effluent when required (e.g., during winter months when irrigation demand is lower).

Approximately ~~146.5~~149.4 acres of the Project site would be located outside the "developed" area, including landscaping, natural open space, easements, fuel modification zones, water quality basins, and existing on-site agricultural uses (avocado orchards). Biological open space comprises 31.2 acres of this area. An approximately 0.5-acre area within biological open space in Neighborhood 3 is proposed for restoration as partial mitigation for impacts to California Department of Fish and Wildlife (CDFW) jurisdictional habitat.

Two existing and adjacent SDG&E easements (with a combined width of 220 feet) extend east-west through the southeastern portion of the site, with several large transmission lines located therein (and these easements/facilities to remain in place). An additional SDG&E easement extends through the northwestern portion of the site, and extends into the open space area noted above that is proposed for retention of existing agricultural use.

The northern portion of the site, which contains avocado groves, includes a Rincon MWD easement for a waterline and access road, totaling 0.9 acre, leading from the northern boundary of the Project to the 3.2-acre Rincon MWD R7 Reservoir site within the northern Valiano parcel and east to Hill Valley Drive.

Project access is proposed via Eden Valley Lane, Mt. Whitney Road, and two future access driveways south of Mt. Whitney Road, all connecting to Country Club Drive. Emergency access is proposed via Hill Valley Drive and Mt. Whitney Road. In addition, a network of trails would



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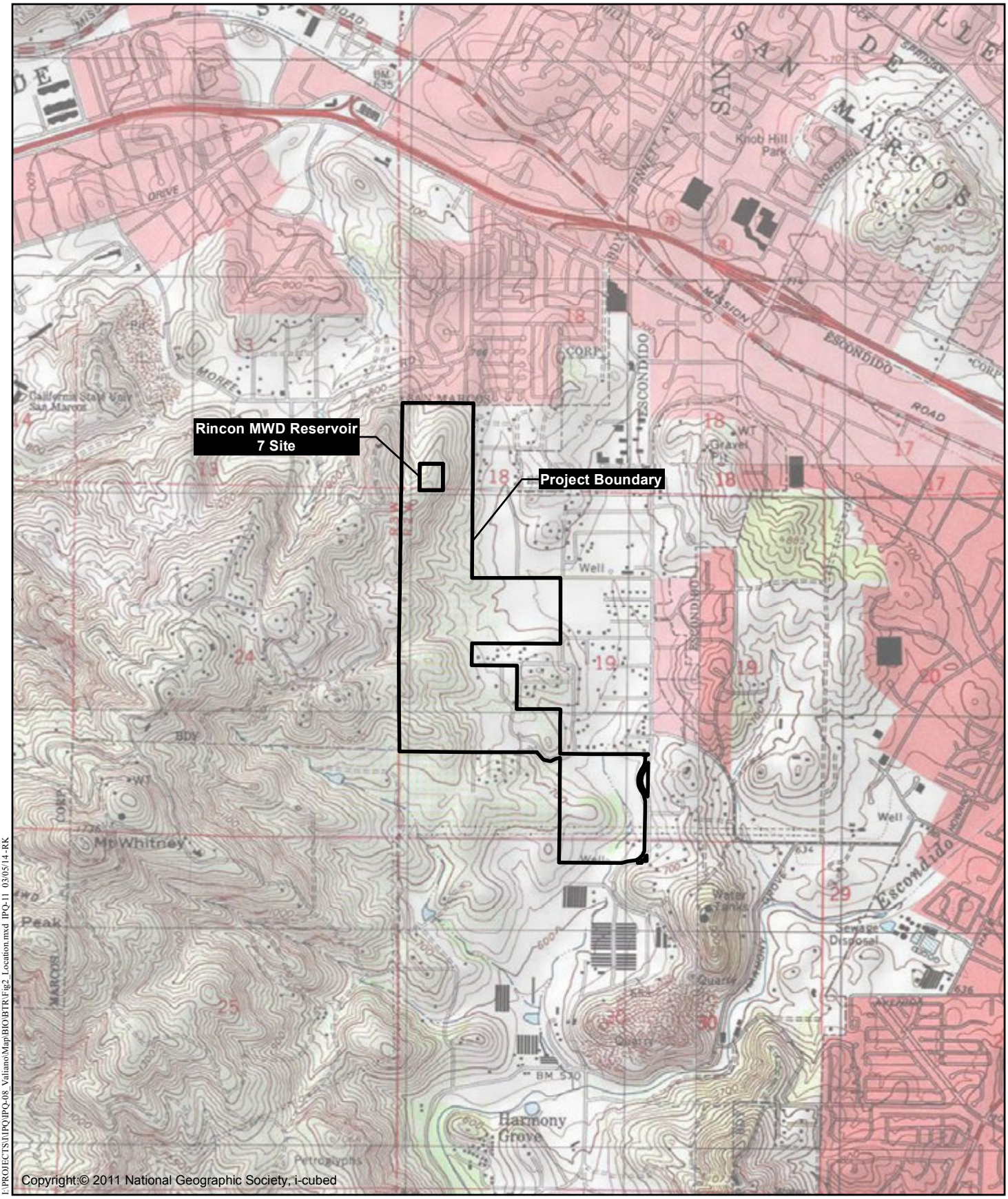
Regional Location Map

VALIANO

HELIX Environmental Planning

N 0 8 Miles

Figure 1



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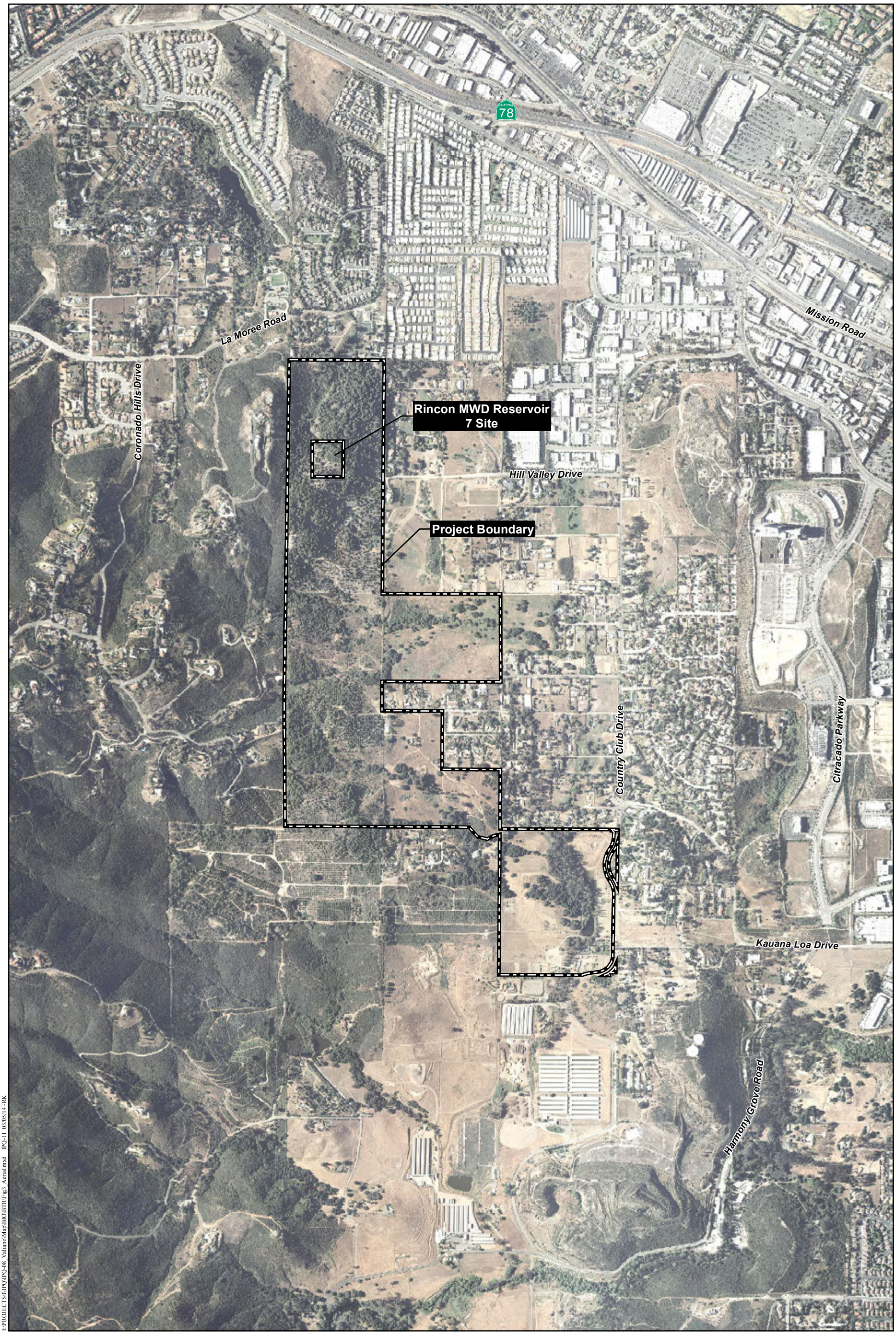
Project Location Map

VALIANO

HELIX Environmental Planning

N 0 2,000 Feet

Figure 2



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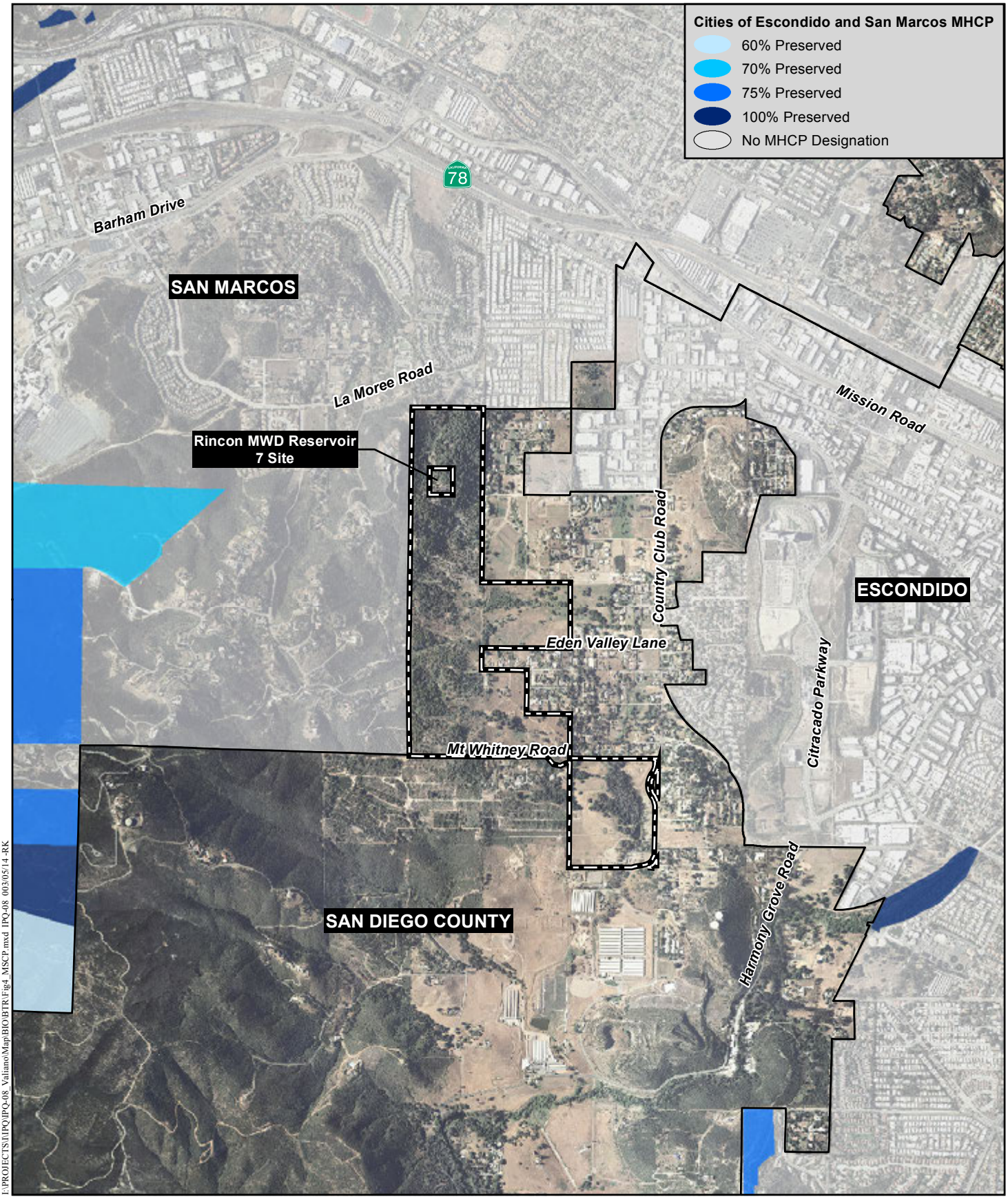
Aerial Photograph of Surrounding Region

VALIANO

HELIX Environmental Planning

N 0 1,000 Feet

Figure 3



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Draft North County MSCP Subarea Plan Designations/ Cities of Escondido and San Marcos MHCP

HELIX Environmental Planning

N

0 2,000 Feet

VALIANO

Figure 4

NEIGHBORHOOD	LOT COUNT
NEIGHBORHOOD 1	98
NEIGHBORHOOD 2	58
NEIGHBORHOOD 3	37
NEIGHBORHOOD 4	78
NEIGHBORHOOD 5	55
TOTAL	326 DU

POTENTIAL EQUESTRIAN LOTS

POTENTIAL SECOND DWELLING UNITS

RINCON MWD
RESERVOIR 7 SITE

NEIGHBORHOOD 4
78 DWELLING UNITS

HILL VALLEY DRIVE

SECONDARY ACCESS

NORTH TRAIL
TURNAROUND

NEIGHBORHOOD 3
37 DWELLING UNITS

TRAIL HEAD
PARK

PRIMARY ACCESS

EDEN VALLEY LANE

ROMANCE ROAD

NEIGHBORHOOD 1
98 DWELLING UNITS

COUNTRY CLUB DRIVE

CALICO LANE

NEIGHBORHOOD 5
55 DWELLING UNITS

NEIGHBORHOOD 2
58 DWELLING UNITS

MT. WHITNEY
ROAD

SECONDARY
ACCESS

WET WEATHER
STORAGE AREA

PRIMARY ACCESS

PRIVATE CENTRAL
OAK PARK

SEWER TREATMENT
AND PUMP AREA

PRIMARY ACCESS

PRIVATE RECREATION
FACILITY

EQUESTRIAN STAGING AREA

PUBLIC
NEIGHBORHOOD
PARK &
STAGING AREA

PRIMARY ACCESS

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Source: Fuscoe Engineering 2015

Neighborhood Layout

VALIANO

HELIX Environmental Planning

Figure 5

be provided that would link to the off-site regional trail system, as well as to the proposed on-site community center.

The Project design does not include substantial off-site facilities or uses, with proposed off-site activities limited to minor modifications along existing roadways to accommodate proposed Project access points. The project also would improve Kauana Loa Drive from approximately 1,500 Fish and Wildlife feet east of Country Club Drive to Harmony Grove Road. Improvements include traffic calming measures such as speed and curve signage, striping, "Bott's Dots" along the centerline, and radar speed signs in both directions approaching the angled curve along this segment. ~~Specifically, t~~These proposed roadway improvements would be confined to previously developed or disturbed areas within existing rights-of-way. The City of Escondido is also requiring improvements to a section of Country Club Drive west of Auto Park Way.

Project construction would be divided into 3 distinct elements: (1) Project grading would encompass 4 distinct phases requiring 6 months each, with Phase 1 to include 154 DUs in Neighborhoods 1 and 2, Phase 2 to encompass 41 DUs in Neighborhood 3, Phase 3 to include 76 DUs in Neighborhood 4, and Phase 4 to include 55 DUs in Neighborhood 5; (2) construction of Project infrastructure would involve 3 phases extending over approximately one year, with Phase 1 encompassing Neighborhoods 1 and 2, Phase 2 including Neighborhoods 3 and 4, and Phase 3 encompassing Neighborhood 5; and (3) vertical building for all 5 neighborhoods would extend over approximately 2.5 years.

1.3 SURVEY METHODS

This report identifies vegetation communities and jurisdictional features on site, sensitive species with potential to occur within the Project site but that were not observed or detected during surveys, as well as sensitive species actually observed during focused species surveys. Surveys discussed in this report were conducted by HELIX Environmental Planning, Inc. (HELIX) in 2011, 2012, 2013, and 2014.

1.3.1 Literature Review

Prior to conducting biological field surveys, a search of the California Natural Diversity Database (CNDDB) for information regarding sensitive species known to occur within the vicinity of the Project site was performed by HELIX in 2012, as well as a review of U.S. Fish and Wildlife (USFWS) and MSCP sensitive species databases. A search of the San Diego Plant Atlas (San Diego Natural History Museum [SDNHM]; 2010) also was conducted.

1.3.2 Biological Surveys

General biological surveys of the Project site were conducted according to County Requirements (2010) by HELIX on October 18, 2011, February 17, 2012, and November 21, 2012. Vegetation was mapped on a 1"=100' scale aerial of the site. The entire site was surveyed on foot with the aid of binoculars and all detected plant and animal species were recorded. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows,

tracks, or scat. All plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. General biological data, including vegetation mapping and species inventories, have been updated opportunistically based on results of subsequent surveys. The site was examined for evidence of vernal pools during the general biological survey, as well as during focused surveys. No potential pools or basins were observed. In addition to the general biological survey and vegetation mapping, a jurisdictional delineation, rare plant survey, and protocol surveys for coastal California gnatcatcher (*Polioptila californica californica*) and least Bell's vireo (*Vireo bellii pusillus*) also were conducted. See Table 1 for a list of dates of completed surveys.

Table 1
SURVEY INFORMATION

DATE	PERSONNEL	SURVEY TYPE
October 18, 2011	Stacy Nigro	General biological survey and vegetation mapping
February 17, 2012	Larry Sward Erica Harris	General biological survey, vegetation mapping, jurisdictional delineation
February 29, 2012	Larry Sward Tara Baxter	Jurisdictional delineation
November 21, 2012	Larry Sward	General biological survey, vegetation mapping
November 27, 2012	Larry Sward	Jurisdictional delineation
May 2, 2013	Stacy Nigro, George Aldridge, Jason Kurnow	Rare plant survey, habitat assessments for coastal California gnatcatcher and least Bell's vireo
May 10, 2013	Stacy Nigro	Least Bell's vireo survey #1 of 8
May 19, 2013	John Konecny	Least Bell's vireo survey #2 of 8
May 29, 2013	John Konecny	Least Bell's vireo survey #3 of 8
June 8, 2013	John Konecny*	Least Bell's vireo survey #4 of 8 Coastal California gnatcatcher survey #1 of 3
June 23, 2013	John Konecny	Least Bell's vireo survey #5 of 8 Coastal California gnatcatcher survey #2 of 3
June 30, 2013	John Konecny	Least Bell's vireo survey #6 of 8
July 7, 2013	John Konecny	Least Bell's vireo survey #7 of 8
July 21, 2013	John Konecny	Least Bell's vireo survey #8 of 8 Coastal California gnatcatcher survey #3 of 3
July 22, 2013	Stacy Nigro George Aldridge	Jurisdictional delineation
July 22, 2014	Stacy Nigro	General biological survey, vegetation mapping
September 29, 2015	Stacy Nigro	General biological survey, vegetation mapping

*USFWS Section 10(a) permit number TE837308-5

All portions of the project site were surveyed for potential resources and evaluated for project impacts, including the northern area added to the Tentative Map in 2014. The off-site sewer options alternative alignments were surveyed on July 22, 2014 (Table 1). Offsite improvements associated with the project and included in the survey and impact evaluation include improvements to Hill Valley Drive, Mt. Whitney Road, and Country Club Drive, as well as the

off-site sewer options alternative alignments. The off-site County Club Drive improvements area near Auto Park Way was surveyed on September 29, 2015 (Table 1).

1.3.3 Focused Species Surveys

Focused surveys conducted within the Project site are described below.

Rare Plant Surveys

A rare plant survey was conducted on May 2, 2013 (Table 1). The entire site was traversed by foot and all habitat areas inspected for the presence of rare plant species. Rare plant species also were looked for opportunistically during other surveys. Rare plants investigated include those that are listed as threatened or endangered by the USFWS or the CDFW; those that are on the County Sensitive Plant List (County 2010b); and narrow endemic species with potential to occur on site.

Coastal California Gnatcatcher

Protocol surveys for coastal California gnatcatcher were completed in 2013 (Table 1). Three site visits were completed per USFWS protocol (USFWS 1997). The surveys were conducted by walking through vegetation or on adjacent paths, and birds were viewed with the aid of binoculars, where necessary. If gnatcatchers were not detected passively, a digital call-prompt was played.

Least Bell's Vireo

Protocol surveys for least Bell's vireo were conducted in 2013 (Table 1). Eight protocol surveys were conducted pursuant to USFWS guidelines (USFWS 2001). All potential vireo habitat was surveyed on foot with the aid of binoculars.

1.3.4 Jurisdictional Delineation

A jurisdictional delineation was performed by HELIX in 2012, with additional data collection in 2013 (HELIX 2014). Prior to beginning fieldwork, aerial photographs (1"=100' 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.

The delineation was conducted to identify and map existing areas under U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344) and wetland and streambed habitats under CDFW jurisdiction pursuant to Section 1600 of the California Fish and Game Code. It was also conducted to determine areas that are "Wetlands," under the County Resource Protection Ordinance (RPO; County 2007). This information is necessary to evaluate jurisdictional impacts and permit requirements associated with development of the property.

Waters of the U.S.

All areas with depressions, drainage channels, or wetland vegetation were evaluated for the presence of Waters of the U.S. (WUS; USACE jurisdiction), including jurisdictional wetlands. The USACE wetlands were delineated pursuant to the Wetlands Delineation Manual (Environmental Laboratory 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). Areas were determined to be non-wetland WUS if there was evidence of regular surface flow (e.g., bed and bank) but the vegetation and/or soils criterion were not met.

CDFW Jurisdictional Areas

The 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). 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 County RPO (County 2011): (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 Survey Limitations

All noted animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. However, the lists of species identified are not necessarily comprehensive accounts of all species that occur on the site, as species that are nocturnal, secretive, or seasonally restricted may not have been observed.

1.3.6 Nomenclature

Nomenclature used in this report comes from Holland (1986) and Oberbauer (2008) for vegetation; Baldwin et al (2012) for plants; Glassberg (2001) for butterflies; Collins and Taggart (2006) for reptiles and amphibians; American Ornithologists' Union (2013) for birds; and Baker et al. (2003) for mammals. Plant species status is taken from the California Native Plant Society (CNPS; 2015) and CDFW (2015a). Animal species status is from CDFW (2015b and 2015c).

1.4 ENVIRONMENTAL SETTING

The northern portion of the site is comprised of southern mixed chaparral, non-native grassland, and non-native woodland transitioning into steep hills supporting avocado orchards. The southern and western portions of the site are also comprised of steep hills supporting avocado orchards and some citrus. These hills transition into mostly gently sloping land in the eastern portion of the site, consisting primarily of grassland habitat but also supporting native and non-native woodlands, as well as some riparian habitat. The highest point on the property is near the northwest corner, creating runoff to the east and south. Elevations range from approximately 614 feet above mean sea level (amsl) in the southeastern portion of the site to 1,013 feet amsl in the northwestern portion of the site.

Approximately 70 percent of the site burned in the wildfire that occurred in May 2014. Fire affected the majority of avocado orchard occurring on site, as well as grassland, eucalyptus forest/woodland, sage scrub, chaparral, oak woodland, and riparian habitats. Fire is a natural part of the ecosystem process in southern California, and the burned vegetation communities are expected to recover.

Land uses in the surrounding area include a mixture of existing spaced rural residential, agriculture, and undeveloped uses. Residential development occurs to the north, east, and west, with rural/agricultural uses to the south and the immediate north. The City of San Marcos adjoins the western boundary and is fully developed with large-lot residential uses in this area.

Generalized climate for the site, as derived from the soil descriptions, is regarded as dry sub-humid mesothermal with warm dry summers and cold moist winters. Mean annual precipitation is between 14 and 18 inches and the mean annual temperature is between 60 and 62 degrees Fahrenheit. The frost-free season is 260 to 300 days.

Soils information was taken from the Natural Resource Conservation Services' Web Soil Survey (2012) and Bowman (1973). Cieneba soils formed from material weathered from granite and other rocks of similar texture and composition. Fallbrook soils are gently rolling to very steep and are on round hills. They formed in material weathered from granite and closely related granitic rocks. Usually the rock is deeply weathered. Rock outcrops are common in some areas. Slopes range from 2 to 75 percent. The soils formed in material weathered from decomposed granite and other closely related rocks. Visalia soils are on alluvial fans and flood plains and have slopes of 0 to 5 percent. The elevation range for these soil types is from 400 to 2,000 feet amsl.

Fourteen soil types are mapped on the Project site, with most of the site mapped as Cieneba rocky coarse sandy loam (9 to 30 percent slopes, eroded) and Cieneba very rocky coarse sandy loam (30 to 75 percent slopes). There are also areas of Fallbrook-Vista sandy loams (9 to 15 and 15 to 30 percent slopes), Vista coarse sandy loams (5 to 9 and 9 to 15 percent slopes), Cieneba coarse sandy loam (5 to 15 percent slopes, eroded), Escondido very fine sandy loams (9 to 15 and 15 to 30 percent slopes, eroded), Las Posas fine sandy loam (9 to 15 percent slopes, eroded), and Visalia sandy loam (2 to 5 percent slopes). Additionally, very small areas of the site contain

Placentia sandy loam (thick surface, 2 to 9 percent slopes), Huerhuero loam (2 to 9 percent slopes), and Wyman loam (2 to 5 percent slopes).

1.4.1 Regional Context

The Project site is located within the North County Metro Segment of the Draft North County Subarea Plan (Figure 4). The majority of the site is outside any proposed Pre-approved Mitigation Area (PAMA). The Project site's southern boundary is adjacent to the approved Harmony Grove development which is designated as take authorized and dedicated preserve within the draft north County plan. A small portion (11.7 acres) in the southeastern corner of the Project site is designated as proposed PAMA connecting to 1.4 acres of off-site open space within Harmony Grove Village to the south. The proposed PAMA on-site is within existing intensive agriculture, open water, and eucalyptus forest; and no development is proposed over this area. Land uses in the surrounding area include a mixture of existing spaced rural residential, agriculture, and undeveloped uses. Residential development occurs to the north, east, and west, with rural/agricultural uses to the south and the immediate north. The City of San Marcos adjoins the western boundary and is developed with large-lot residential uses in this area.

1.4.2 Vegetation Communities/Habitat Types

Just more than half the site (130.3~~2~~ acres) is in active agricultural use, including 100.2~~1~~ acres of avocado (*Persea americana*) and citrus (*Citrus* sp.) orchards, 8.8 acres of intensive agriculture, and 21.3 acres of extensive agriculture (Table 2 and Figures 6a and 6b). The orchards are located primarily on the steep slopes on site. Non-native grassland is also abundant on site, with most of the grassland located in the central and eastern portions of the site. Over one-half of the non-native grassland was at one time planted and irrigated with agricultural groves. Native vegetation present on site includes southern mixed chaparral, coast live oak woodland (including disturbed), southern riparian forest, herbaceous wetland, freshwater marsh, Diegan coastal sage scrub, southern willow scrub, southern riparian woodland (including disturbed), and mule fat scrub. Eucalyptus forest and woodland, non-native vegetation, disturbed wetland, tamarisk scrub, disturbed habitat, and developed areas also occur on site.

Twenty-one vegetation communities or land uses were mapped on site. Of these, all but nine (eucalyptus forest, eucalyptus woodland, tamarisk scrub, non-native vegetation, orchard, intensive agriculture, extensive agriculture, disturbed habitat, and developed land) are considered sensitive habitats (Table 2).

Sensitive habitat is defined as land that supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the CEQA Guidelines. Sensitive vegetation communities on site include: southern riparian forest, southern riparian woodland (including disturbed), southern willow scrub, mule fat scrub, freshwater marsh, herbaceous wetland, disturbed wetland, open water/pond, coast live oak woodland (including disturbed), Diegan coastal sage scrub, southern mixed chaparral, and non-native grassland. Impacts to sensitive habitats require mitigation. Although not considered a sensitive habitat, extensive agriculture comprised of pasture/field also requires mitigation for impacts pursuant to County guidelines as it is considered foraging habitat for raptors.

RSHA

RINCON MWD
RESERVOIR
7 SITE

Hill Valley Drive

MUDE

COHA

YEWA

WTKI

RSHA

TUVU

WEBL

WTKI

NOHA

Eden Valley Lane

Romance Road

Calico Lane

GRSP

Mt Whitney Road

Project Boundary

Vegetation

- Southern Riparian Forest
- Southern Riparian Woodland - Disturbed
- Southern Willow Scrub
- Freshwater Marsh
- Mule Fat Scrub
- Herbaceous Wetland
- Disturbed Wetland
- Tamarisk Scrub
- Coast Live Oak Woodland
- Coast Live Oak Woodland - Disturbed
- Non-native Grassland
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Southern Mixed Chaparral
- Eucalyptus Forest
- Eucalyptus Woodland
- Pond
- Non-native Vegetation
- Extensive Agriculture
- Orchard
- Disturbed Habitat
- Developed

Sensitive Resources

- COHA Cooper's Hawk *(Accipiter cooperii)*
- GRSP Grasshopper Sparrow *(Ammodramus savannarum)*
- MUDE Southern Mule Deer *(Odocoileus hemionus fuliginata)*
- NOHA Northern Harrier *(Circus cyaneus)*
- RSHA Red-shouldered Hawk *(Buteo lineatus)*
- TUVU Turkey Vulture *(Cathartes aura)*
- WEBL Western Bluebird *(Sialia mexicana)*
- WTKI White-tailed Kite (*Elanus leucurus*)
- YEWA Yellow Warbler (*Dendroica petechia brewsteri*)

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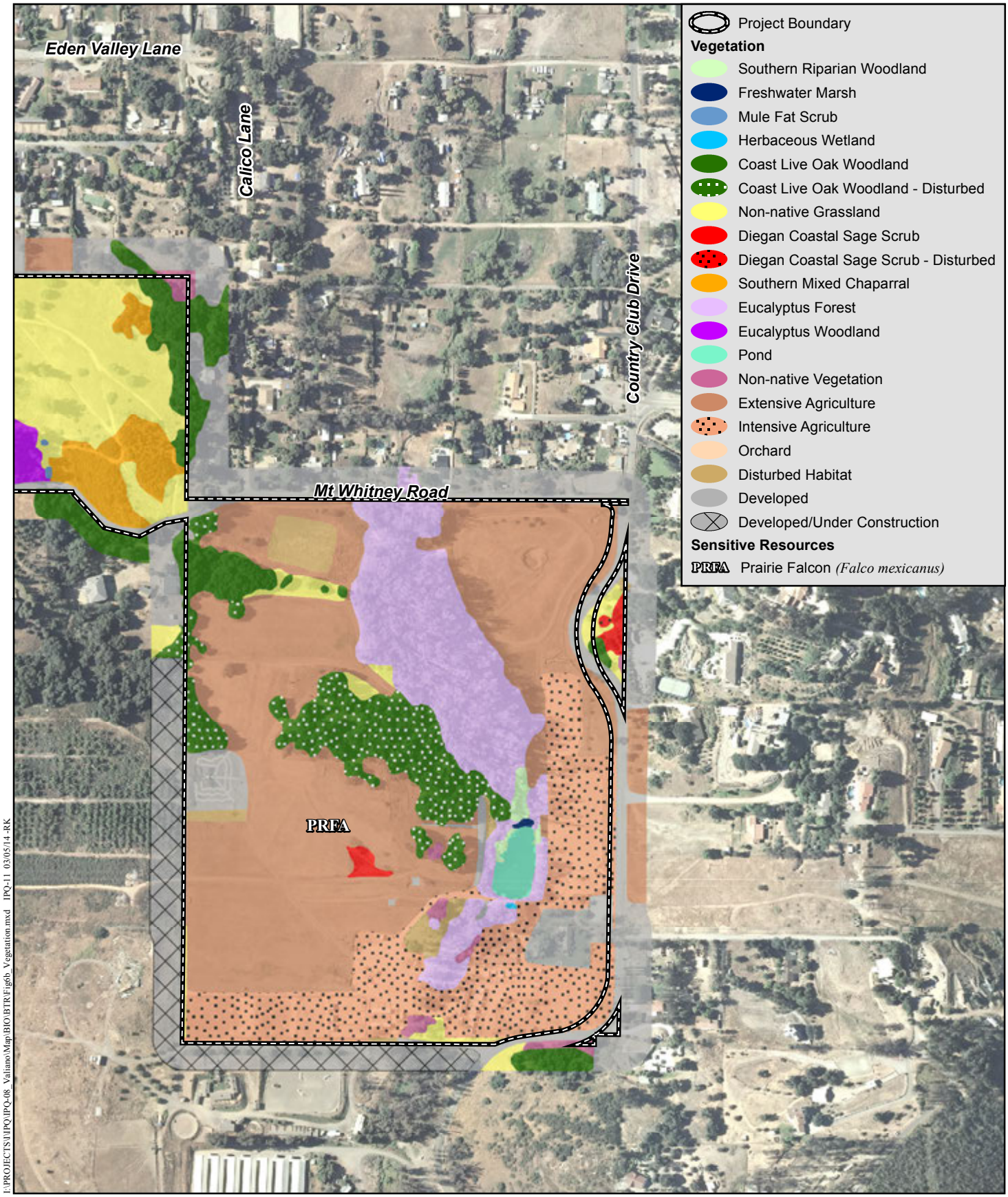
Vegetation and Sensitive Resources Map

VALIANO

HELIX Environmental Planning

N 0 400 Feet

Figure 6a



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Vegetation and Sensitive Resources Map

VALIANO

HELIX Environmental Planning

N 0 400 Feet

Figure 6b

Table 2 EXISTING HABITAT/VEGETATION COMMUNITIES ON SITE	
VEGETATION COMMUNITY*	**ACRE(S)****
Southern Riparian Forest (61300)	2.50
Southern Riparian Woodland – including disturbed (62000)	0.29
Southern Willow Scrub (63320)	0.15
Mule Fat Scrub (63310)	0.02
Freshwater Marsh (52400)	0.12
Herbaceous Wetland (52510)	0.35
Disturbed Wetland (11200)	0.13
Open Water/Pond (64140)	0.51
Tamarisk Scrub (63810)	0.04
Coast Live Oak Woodland – including disturbed (71160)	11.7
Diegan Coastal Sage Scrub – including disturbed (32500)	1.8
Southern Mixed Chaparral – including disturbed (37121)	8.0
Eucalyptus Forest (79100)	7.2
Eucalyptus Woodland (79100)	3.5
Non-native Grassland (42200)	63.9
Non-native Vegetation (11000)	1.5
Orchard (18100)	100.2†
Intensive Agriculture (18200)	8.8
Extensive Agriculture (18300)	21.3
Disturbed Habitat (11300)	2.4
Developed Land (12000)	4.1
TOTAL	**238.8**

* Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008).

** Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding.

† The Rincon MWD R7 Reservoir site contains an additional 3.2 acres of orchard.

Southern Riparian Forest and Woodland

Southern riparian forests and woodlands are comprised of winter-deciduous trees that require water near the soil surface. Willow cottonwood (*Populus* sp.) and western sycamore (*Platanus racemosa*) form a dense medium height woodland or forest in moist canyons and drainage bottoms. Associated understory species include mule fat (*Baccharis salicifolia*), stinging nettle (*Urtica dioica* ssp. *holosericea*), and wild grape (*Vitis girdiana*). The differences between woodlands and forests are physiognomic rather than compositional. Woodlands have less canopy cover than forests. In forests, the canopies of individual tree species do overlap so that a canopy cover exceeding 100 percent may occur in the upper tree stratum. In woodlands, there may be large canopy gaps within the upper tree stratum.

Species in these vegetation communities within the Project site include arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), mule fat, and western sycamore. Non-native species are also present, including Mexican fan palm (*Washingtonia robusta*), giant reed (*Arundo donax*), and eucalyptus (*Eucalyptus* sp.). Areas with an abundance of non-native species are

mapped as a disturbed phase of this habitat. Southern riparian forest and southern riparian woodland on site are CDFW habitat and RPO wetland but not USACE jurisdictional. Further discussion is provided below in Section 1.4.7.

A total of 2.50 acres of southern riparian forest is present in the central portion of the site along a drainage that flows from the west to the east to Surrey Lane (Table 2, Figure 6a). A total of 0.29 acre of southern riparian woodland, including 0.05 acre that are disturbed, is present along the drainage course in the southeastern corner of the site (Figures 6a and 6b).

Southern Willow Scrub

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows in association with mule fat, and scattered emergent cottonwood and western sycamores. This vegetation community occurs on loose, sandy or fine, gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). In the absence of periodic flooding, this early seral type would be succeeded by southern cottonwood or western sycamore riparian forest.

On site, this habitat type is composed of arroyo willow and mule fat and some scattered Mexican fan palms. A total of 0.15 acres of southern willow scrub is present in 6 locations along drainage courses and as small, isolated stands in the southern, central, and northern portions of the site (Table 2, Figure 6a). The majority of southern willow scrub on site is CDFW jurisdictional and RPO wetland. Further discussion is provided below in Section 1.4.7.

Mule Fat Scrub

Mule fat scrub is a stunted, shrubby riparian scrub community dominated by mule fat and interspersed with small willows. This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. This community may be maintained by frequent flooding, the absence of which would lead to a cottonwood or sycamore dominated riparian woodland or forest (Holland 1986). In other places, the limited hydrology may be unsuitable for anything more mesic than mule fat scrub. The latter is the likely explanation for the mule fat scrub occurring on site.

A few small patches of monotypic mule fat stands occur near the southern property boundary, comprising 0.02 acre (Table 2, Figure 6a). These stands are not associated with any observed surface hydrology, but are located peripherally along a drainage course. They are thought to be the result of and sustained by artificial hydrology (i.e., runoff from agricultural irrigation). Mule fat scrub on site is CDFW jurisdictional and RPO wetland.

Freshwater Marsh

Coastal and valley freshwater marsh is dominated by perennial, emergent monocots, 5 to 13 feet tall, forming incomplete to completely closed canopies. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes and springs, and

freshwater or brackish marshes. These areas are semi- or permanently flooded yet lack a significant current (Holland 1986). Dominant species include cattails (*Typha* sp.) and bulrushes (*Schoenoplectus* sp.), along with umbrella sedges (*Cyperus* sp.), rushes (*Juncus* sp.), and spike-sedge (*Eleocharis* sp.).

Species in this vegetation community within the property include southern cattail (*Typha domingensis*). A total of 0.12 acre of this vegetation type occurs along some of the larger drainages (Table 2, Figures 6a and 6b). Freshwater marsh on site is under the jurisdiction of the USACE and CDFW, and is considered RPO wetland.

Herbaceous Wetland

Herbaceous wetland is a low-growing, herbaceous community that is dominated by a variety of native wetland species. It typically occurs in seasonally wet areas with heavy soils. Dominant species usually include wrinkled rush (*Juncus rugulosus*), toad rush (*Juncus bufonius*), and wetland grasses. Other common species of this habitat include cocklebur (*Xanthium strumarium*) and western goldenrod (*Euthamia occidentalis*).

Herbaceous wetland on the Project site is dominated by wrinkled rush, Mexican rush (*Juncus mexicanus*), saltgrass (*Distichlis spicata*), and western ragweed (*Ambrosia psilostachya*). A total of 0.35 acre of herbaceous wetland is present on site (Table 2, Figures 6a and 6b). The majority of herbaceous wetland on site is under the jurisdiction of the USACE and CDFW and is considered RPO wetland. Further discussion is provided below in Section 1.4.7.

Disturbed Wetland

This vegetation community is dominated by exotic wetland species that invade areas that have been previously disturbed or undergone periodic disturbances. These non-natives become established more readily following natural or human-induced habitat disturbance than the native wetland flora. Characteristic species of disturbed wetlands include bristly ox-tongue (*Helminthotheca echioides*), cocklebur, and dock (*Rumex* spp.).

The dominant species in this community on site include annual beard grass (*Polypogon monspeliensis*) and Mexican fan palm, along with a low cover of native wetland species. A total of 0.13 acre of disturbed wetland occurs on site consisting of a small, 0.08-acre area north of Mt. Whitney Road and a 0.05-acre area along a drainage in the northernmost portion of the site (Table 2, Figure 6a). Disturbed wetland on site is under the jurisdiction of the CDFW, and portions are considered RPO wetland, further discussed below in Section 1.4.7.

Open Water/Pond

A freshwater pond is present in the southeastern portion of the Project site, comprising 0.51 acre (Table 2, Figure 6b). The pond is an impoundment of WUS/streambed and is, therefore, USACE and CDFW jurisdictional. This feature is also RPO wetland. The adjacent equestrian center does not supplement the pond with imported water.

Tamarisk Scrub

Tamarisk scrub is typically comprised of shrubs and/or small trees of exotic tamarisk species (*Tamarix* spp.), but may also contain willows (*Salix* spp.), salt bushes (*Atriplex* spp.), catclaw acacia (*Acacia greggii*), and saltgrass. This habitat typically occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it may rapidly displace native species within a drainage course (Holland 1986).

Species in this vegetation community within the proposed Project site include mostly monotypic stands of tamarisk. The 0.04 acre of tamarisk scrub that is present on site (Table 2, Figure 6a) is not USACE or CDFW jurisdictional based on its landscape position, which is on a hillside and not part of any drainage. It is also not RPO wetland.

Coast Live Oak Woodland (including disturbed)

Coast live oak woodland is an open to dense evergreen woodland or forest community, dominated by coast live oak (*Quercus agrifolia*), that may reach a height of 35 to 80 feet. The shrub layer consists of toyon (*Heteromeles arbutifolia*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), spreading snowberry (*Symphoricarpus mollis*), fuchsia-flowered gooseberry (*Ribes speciosum*), and poison oak (*Toxicodendron diversilobum*). A dense herbaceous understory is dominated by miner's lettuce (*Claytonia perfoliata* var. *perfoliata*) and chickweed (*Stellaria media*). This community occurs along the coastal foothills of the Peninsular Ranges, typically on north-facing slopes and shaded ravines (Holland 1986). Coast live oak woodland can be further described as either open (72261) or dense (72262).

A total of 11.7 acres of coast live oak woodland, including 4.1 acres that are disturbed, is present in the central and southeastern portions of the site (Table 2, Figures 6a and 6b).

Diegan Coastal Sage Scrub (including disturbed)

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Four distinct coastal sage scrub geographical associations (northern, central, Venturan, and Diegan) are recognized along the California coast. Despite the fact that it has been greatly reduced from its historical distribution (Oberbauer 1991), the Diegan association is the dominant coastal sage scrub in coastal southern California from Los Angeles to Baja California, Mexico (Holland 1986). Diegan coastal sage scrub was listed as the third most extensive vegetation community in the County in 1965 (CDFW 1965). Oberbauer (1979) and Oberbauer and Vanderwier (1991) suggest that nearly 72 percent of the County's original sage scrub habitat has been destroyed or modified, primarily a result of urban expansion.

Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California

sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* ssp. *fasciculatum*), laurel sumac (*Malosma laurina),* and black sage (*Salvia mellifera*).

Diegan coastal sage scrub (including disturbed) is considered a sensitive habitat by the USFWS, CDFW, and the County, and is given the highest inventory priority in the CNDDB. This habitat type can support a number of federally and state listed and rare plants, as well as several bird, reptile, and insect species that are also federally listed, including the coastal California gnatcatcher.

A total of 1.8 acres of Diegan coastal sage scrub are present, with the majority occurring in the north-central portion of the site (Table 2, Figures 6a and 6b).

Southern Mixed Chaparral (including disturbed)

Southern mixed chaparral is comprised of broad-leaved sclerophyllous shrubs that can reach 6 to 10 feet in height and form dense often nearly impenetrable stands with poorly developed understories. In this mixed chaparral, the shrubs are generally tall and deep rooted, with a well-developed soil litter layer, high canopy coverage, low light levels within the canopy, and lower soil temperatures (Keeley and Keeley 1988). This vegetation community occurs on dry, rocky, often steep north-facing slopes with little soil. As conditions become more mesic, broad-leaved sclerophyllous shrubs that resprout from underground root crowns become dominant. Depending upon relative proximity to the coast, southern mixed chaparral is dominated by chamise (*Adenostoma fasciculatum)*, mission manzanita (*Xylococcus bicolor*), coast white lilac (*Ceanothus verrucosus*), Ramona lilac (*Ceanothus tomentosus*), white-stem wild-lilac (*Ceanothus leucodermis*), big-berry manzanita (*Arctostaphylos glauca*), and scrub oak (*Quercus dumosa*). This vegetation community provides important habitat for wide-ranging species such as mule deer (*Odocoileus hemionus*) and mountain lion (*Felis concolor*). This vegetation community is considered sensitive.

A total of 8.0 acres of granitic southern mixed chaparral occurs within the northwestern corner of the Project site, as well as along the western border near the center of the site and just north of Mt. Whitney Road (Table 2, Figures 6a and 6b).

Eucalyptus Forest and Woodland

The eucalyptus forest present on site has an overstory dominated by red gum (*Eucalyptus camaldulensis*) in association with Mexican fan palm. This community supports a sparsely vegetated understory that includes numerous upland species such as Bermuda grass (*Cynodon dactylon*), smilo grass (*Stipa miliaceum*), bristly ox-tongue, salt heliotrope (*Heliotropium curassavicum*), western ragweed, and coast live oak, as well as scattered wetland species such as Mexican fan palm and hastate orache (*Atriplex prostrata*). Hydric soils and wetland hydrology indicators were absent. This community is not under the jurisdiction of the USACE or CDFW, and it is not RPO wetland. Red gum is a non-native species that is commonly found in disturbed areas; it is also widely cultivated in California and is the most widely planted species of eucalyptus (Hickman, ed. 1993). In some cases on site, a eucalyptus

forest overstory contains an herbaceous wetland understory; the latter of which is USACE and CDFW jurisdictional and RPO wetland.

Eucalyptus woodland occurs as a few scattered stands of eucalyptus in the southern portion of the Project site. Other species observed in this habitat include lemonadeberry (*Rhus integrifolia*), Peruvian pepper tree (*Schinus molle*), and Brazilian pepper tree (*Schinus terebinthifolius*).

A total of 7.2 acres of eucalyptus forest and 3.5 acres of eucalyptus woodland are present along the drainage course in the southeastern portion of the site as well as in the northwestern corner of the site (Table 2, Figures 6a and 6b).

Non-native Grassland

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 introduced annual species that comprise non-native grassland originated from the Mediterranean region of Europe, an area with a climate similar to that in California and a long history of agriculture. These 2 factors have contributed to the successful invasion and establishment of these species and the replacement of native grasslands by annual-dominated non-native grassland (Jackson 1985).

Non-native grassland covers 63.9 acres on site, primarily in the eastern half of the central portion of the site (Table 2, Figures 6a and 6b) with characteristic species consisting of oats (*Avena* sp.), ripgut grass (*Bromus diandrus*), red brome (*Bromus madritensis*), soft chess (*Bromus hordaceus*), western ragweed, Italian ryegrass (*Festuca perennis*), barley (*Hordeum* sp.), and black mustard (*Brassica nigra*). Portions of grassland habitat on site are dominated by non-native broadleaf species rather than grasses, including species such as black mustard and cheeseweed (*Malva parviflora*).

Non-native Vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* sp.], peppertree [*Schinus* sp.]), many of which are also used in landscaping. A total of 1.5 acres of non-native vegetation is present as landscaping around an existing house in the southeastern portion of the site as well as a small stand in the northwestern corner of the site and other small, scattered stands (Table 2, Figures 6a and 6b).

Orchard

Orchards are active, intensive agricultural uses. Orchards on site are primarily avocado, although a few citrus trees also are present. A total of 100.2 acres of orchard is present in hills along the western half of the site (Table 2, Figure 6a). The Rincon MWD R7 Reservoir site contains an additional 3.2 acres of orchard.

Intensive Agriculture

Intensive agriculture includes dairies, nurseries, and chicken ranches. An equestrian center in the southeastern corner of the site constitutes 8.8 acres of intensive agriculture (Table 2, Figure 6b).

Extensive Agriculture

Extensive agriculture includes fields, pastures, and row crops. A total of 21.3 acres of extensive agriculture, in the form of pastures for the equestrian center, is present in the southeastern corner of the site (Table 2, Figures 6a and 6b).

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat.

Disturbed habitat totals 2.4 acres on site (Table 2, Figures 6a and 6b) and is comprised of an unvegetated horse corral, bare dirt areas surrounding existing development, and previously disturbed soils supporting only non-native forbs such as cheeseweed, black mustard, and dwarf nettle (*Urtica urens*). These areas occur only in the southwest corner of the site and constitute poor quality habitat.

Developed Land

Developed land exists where permanent structures and/or pavement has been placed (preventing the growth of vegetation) or where landscaping is clearly tended and maintained. Within the Project site, 4.1 acres of developed land includes one single-family residence near the western end of Eden Valley Lane, a single-family residence in the southeastern corner of the site, a landscaped area on the western border of the equestrian center, and a portion of a paved road in the northern portion of the site (Table 2, Figures 6a and 6b).

1.4.3 Flora

HELIX observed a total of 187 plant species within the Project site during surveys to date, of which 94 (50 percent) are non-native species (Appendix A). The predominance of non-native species is indicative of the fact that most of the site is in active agricultural use or contains non-native grasslands.

1.4.4 Fauna

A total of 91 animal species have been observed or otherwise detected on site during biological surveys, including 11 invertebrates, 1 amphibian, 4 reptile, 65 bird, and 10 mammal species (Appendix B).

1.4.5 Sensitive Plant Species

Sensitive species are those considered unusual or limited in that they are: (1) only found in the San Diego region; (2) a local representative of a species or association of species not otherwise found in the region; or (3) severely depleted within their ranges or within the region.

A rare plant survey was conducted on May 2, 2013. Rare plant species also were looked for opportunistically during other surveys. No rare plants were observed on site.

Sensitive Plants with Potential to Occur

Sensitive plant species with potential to occur on site are included in Appendix C (alphabetically by scientific name). Refer to Appendix E for an explanation of status codes. None of the plant species with potential to occur on site listed in Appendix C has a high potential.

No sensitive plant species has been observed on site. Sensitive plant species reported by the CNDDB (2015) in the vicinity include Del Mar manzanita (*Arctostaphylos grandulosa* ssp. *crassifolia*) and San Diego thorn-mint (*Acanthomintha ilicifolia*). Del Mar manzanita occurs within maritime chaparral. Since that vegetation community is not present, its potential to occur on site is very low. San Diego thorn-mint occurs on friable clay soils, often in open areas within grasslands. Since clay soils are not present on site, its potential to occur is very low.

1.4.6 Sensitive Wildlife Species

Ten sensitive animal species (Cooper's hawk [*Accipiter cooperii*], grasshopper sparrow [*Ammodramus savannarum*], red-shouldered hawk [*Buteo lineatus*], turkey vulture [*Cathartes aura*], northern harrier [*Circus cyaneus*], white-tailed kite [*Elanus leucurus*], prairie falcon [*Falco mexicanus*], southern mule deer [*Odocoileus hemionus fuliginata*], yellow warbler [*Setophaga petechia*], and western bluebird [*Sialia mexicana*]) were observed or otherwise detected on site (Figures 6a and 6b) and are further discussed below.

Cooper's hawk (*Accipiter cooperii*)
Status: --/WL; County Group 1
Distribution: Occurs year-round throughout San Diego County's coastal slope where stands of trees are present
Habitat(s): Oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests
Status on site: One individual observed on multiple days in riparian forest and oak woodland habitats in the northeastern portion of the site.

Grasshopper sparrow (*Ammodramus savannarum*)
Status: --/SSC; County Group 1
Distribution: Scattered in small numbers throughout San Diego County year-round
Habitat(s): Grassland
Status on site: One individual observed in grassland in the south-central portion of the site.

Red-shouldered hawk (*Buteo lineatus*)
Status: --/--; County Group 1
Distribution: In San Diego County, observed throughout coastal slope
Habitat(s): Riparian woodland, oak woodland, orchards, eucalyptus groves, or other areas with tall trees
Status on site: Observed flying over the northwest and southern portion of the site

Turkey vulture (*Cathartes aura*)
Status: --/--; County Group 1
Distribution: Observed throughout San Diego County with the exception of extreme coastal San Diego where development is heaviest
Habitat(s): Foraging habitat includes most open habitats with breeding occurring in crevices among boulders
Status on site: One individual observed soaring over grassland in the northeastern portion of the site.

Northern harrier (*Circus cyaneus*)
Status: --/SSC; County Group 1
Distribution: In San Diego County, distribution primarily scattered throughout lowlands but can also be observed in foothills, mountains, and desert
Habitat(s): Open grassland and marsh
Status on site: At least two individuals (male and female) were observed foraging over grassland in the east-central portion of the site.

White-tailed kite (*Elanus leucurus*)
Status: --/Fully Protected; County Group 1
Distribution: Primarily occurs throughout coastal slopes of San Diego County
Habitat(s): Riparian woodlands and oak or sycamore groves adjacent to grassland
Status on site: One individual observed foraging over grassland in the northeastern portion of the site, as well as perching in southern riparian forest.

Prairie falcon (*Falco mexicanus*)
Status: BCC/WL; County Group 1
Distribution: Observed year-round in San Diego County but more commonly during winter
Habitat(s): Nesting occurs on cliff or bluff ledges or occasionally in old hawk or raven nests; foraging occurs in grassland or desert habitats
Status on site: One individual was observed perching on a fence post in the southern portion of the site. This individual was observed on a single day and the species was not observed again during subsequent surveys.

Southern mule deer (*Odocoileus hemionus fuliginata*)
Listing: --/--; County Group 2
Distribution: Southern Riverside County (Tahquitz Valley), south on the coastal slope to the vicinity of San Quintin, Baja California, Mexico.
Habitat: Coastal sage scrub, riparian and montane forests, chaparral, grasslands, croplands, and open areas if there is at least some scrub cover present. Crepuscular activity and movements are along routes that provide the greatest amount of protective cover.
Status on site: Two individuals (male and female) were observed in the northwestern portion of the site within the avocado orchard. It is assumed that the deer came on site from the west, as this is the only side of the site that connects to off-site native habitat, and the deer were observed heading east down the hillside in the northwest corner of the site toward on site grassland. Large mammal bedding sites (presumably those of deer) were noted in the northern portion of the site near the creek.

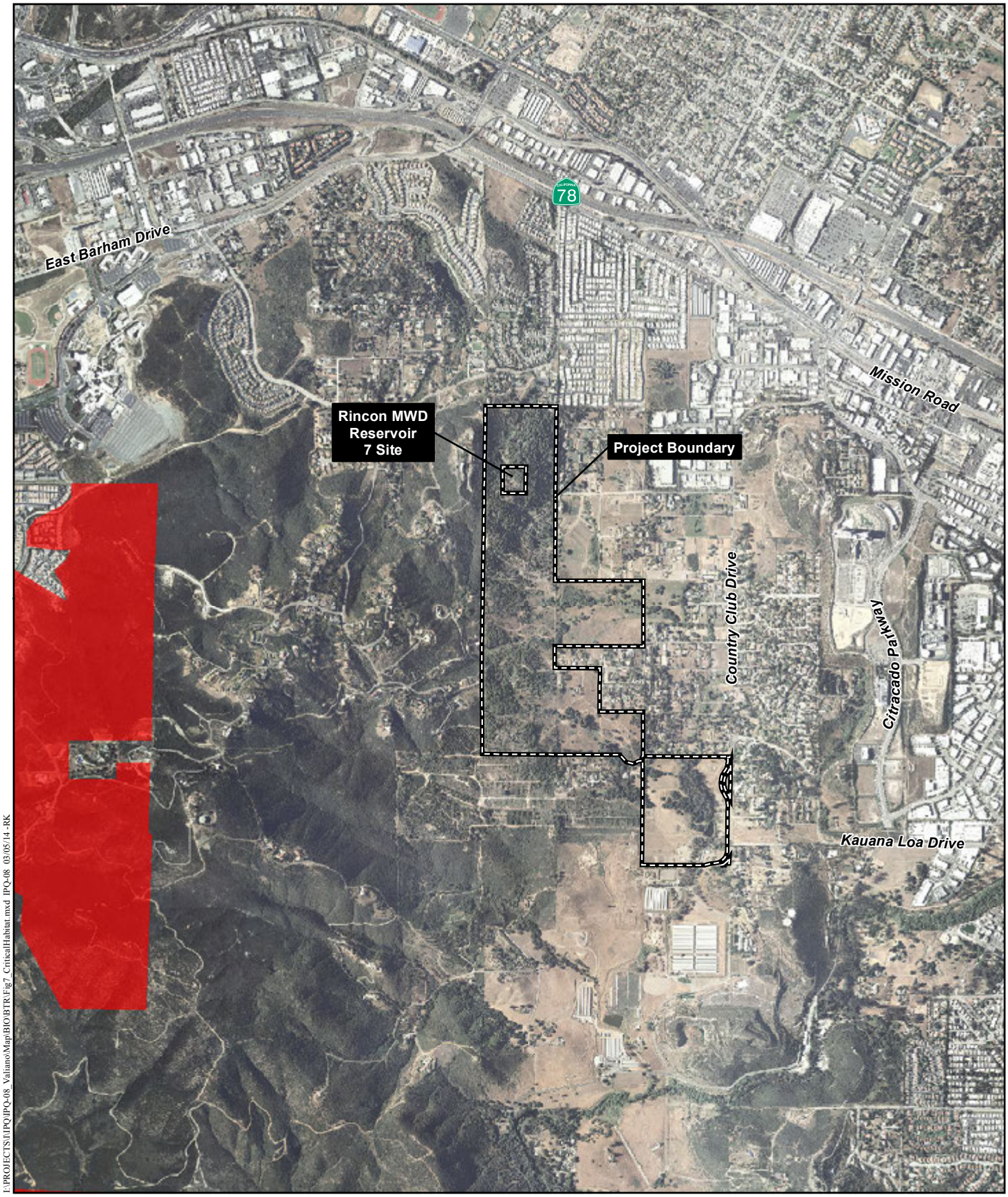
Yellow warbler (*Setophaga petechia*)
Status: --/SSC; County Group 2
Distribution: Observed throughout much of San Diego County during the breeding season with rare sightings in winter
Habitat(s): Riparian woodland
Status on site: At least one individual was observed on the Project site by County staff on March 11, 2013.

Western bluebird (*Sialia mexicana*)
Status: --/--; County Group 2
Distribution: Occurs throughout much of San Diego County, but concentrated in foothills and mountains
Habitat(s): Montane coniferous and oak woodlands, as well as urban areas with mature trees and wide lawns
Status on site: One pair of individuals was observed perching on the fence line bordering the northeastern portion of the site.

The Project site does not contain any designated Critical Habitat for any federally listed species. The nearest Critical Habitat is designated for the coastal California gnatcatcher and is approximately 1 mile to the west (Figure 7).

Sensitive Animals with Potential to Occur

Sensitive animal species present on site or with potential to occur on site are included in Appendix D. The species are grouped into invertebrates and vertebrates (amphibians, reptiles, birds, and mammals) and alphabetized by scientific name. Refer to Appendix E for an explanation of status codes. The California horned lark (*Eremophila alpestris actia*) and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) have high potential to occur on site. Focused surveys conducted in 2013 for coastal California gnatcatcher and least Bell's vireo were negative (Konecny Biological Services 2013 [Appendix F]).



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Coastal California Gnatcatcher Critical Habitat

VALIANO

HELIX Environmental Planning

N 0 2,000 Feet

Figure 7

1.4.7 Wetlands/Jurisdictional Waters

A total of 1.64 acres of WUS (USACE jurisdictional areas) is present on the Project site, including 0.45 acre of wetlands and 1.19 acres of non-wetland WUS consisting of 0.51 acre of open water/pond and 0.68 acre of streambed/drainage (Figures 8a and 8b; Table 3).

Table 3
EXISTING WATERS OF THE U.S.

HABITAT	AREA[1] (acres)
Wetlands	
Freshwater Marsh	0.12
Herbaceous Wetland	0.33
Non-Wetland WUS	
Open Water/Pond	0.51
Non-wetland Waters of the U.S./Streambed	0.68
TOTAL	**1.64**

[1]Rounded to nearest one-hundredth.

CDFW jurisdictional areas present on the Project site total 7.05 acres, comprised of 5.65 acres of vegetated habitat and 1.40 acres of open water/pond and streambed (Figures 9a and 9b, Table 4).

Table 4
EXISTING CDFW JURISDICTIONAL AREAS

HABITAT	AREA[1] (acres)
Coast Live Oak Woodland	2.05
Disturbed Wetland	0.13
Freshwater Marsh	0.12
Herbaceous Wetland	0.41
Mule Fat Scrub	0.02
Open Water/Pond	0.51
Southern Riparian Forest	2.50
Southern Riparian Woodland	0.29
Southern Willow Scrub	0.13
Streambed	0.89
TOTAL	**7.05**

[1]Rounded to nearest one-hundredth.

San Diego County RPO wetlands on site total 3.99 acres (Table 5; Figures 10a and 10b). A total of 3.06 acres of on-site areas was considered to fall under CDFW jurisdiction but not qualify as RPO wetlands, including 2.05 acre of coast live oak woodland, 0.89 acre of non-vegetated streambed, 0.08 acre of disturbed wetland, 0.02 acre of herbaceous wetland, and 0.02 acre of southern willow scrub. These areas are further discussed below and shown on Figure 10a. Jurisdictional delineation data forms are included as Appendix G.

Table 5
EXISTING RPO WETLANDS

HABITAT	AREA[1] (acres)
Freshwater Marsh	0.12
Herbaceous Wetland	0.39
Mule Fat Scrub	0.02
Open Water/Pond	0.51
Southern Riparian Forest	2.50
Southern Riparian Woodland	0.29
Southern Willow Scrub	0.11
Disturbed Wetland	0.05
TOTAL	**3.99**

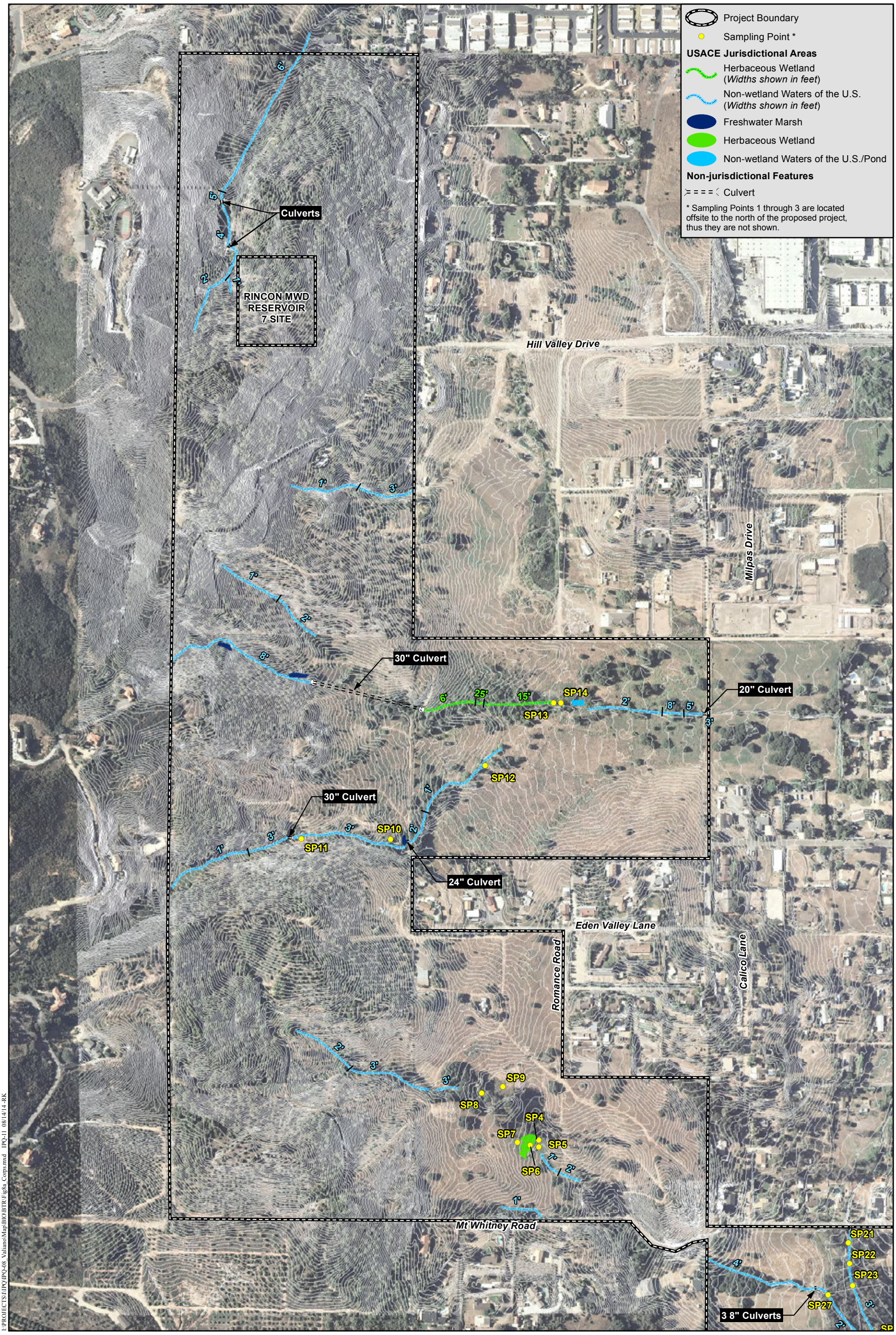
[1]Rounded to nearest one-hundredth.

Streambeds on site do not qualify as RPO wetlands because they do not support hydrophytic vegetation, do not have hydric soil, and do not have a non-soil substratum. These areas are regulated as non-wetland WUS by the USACE and streambed by CDFW.

Coast live oak woodland on site does not qualify as RPO wetland as the habitat is dominated by coast live oak, an upland-rated species, and the understory does not support a predominance of hydrophytic vegetation. These areas also do not contain hydric soils. Running water is occasionally present in these locations as a result of runoff from upstream agricultural operations but has not resulted in the formation of hydric soils or the dominance of hydrophytic vegetation in this habitat. Coast live oak woodland on site does not meet RPO wetland criteria.

A total of 0.08 acre of disturbed wetland occurring on site in Neighborhood 2 (Area A on Figures 10a and 14a) is a human-induced wetland area resulting from upstream and adjacent irrigated orchards and is small and isolated from other wetland areas, has negligible biological functions, is not a vernal pool, and does not support wetland-dependent sensitive species. The unvegetated channel running through this area contains the same soils as the adjacent upland habitat. As such, this area does not meet RPO wetland criteria

A total of 0.02 acre of herbaceous wetland occurring around Sampling Point 11 in Neighborhood 4 (Area B on Figures 10a and 14a) was not considered to meet RPO wetland criteria as it is a human-induced wetland area resulting from upstream and adjacent irrigated orchards and is small and isolated from other wetland areas, has negligible biological functions,



Waters of the U.S.

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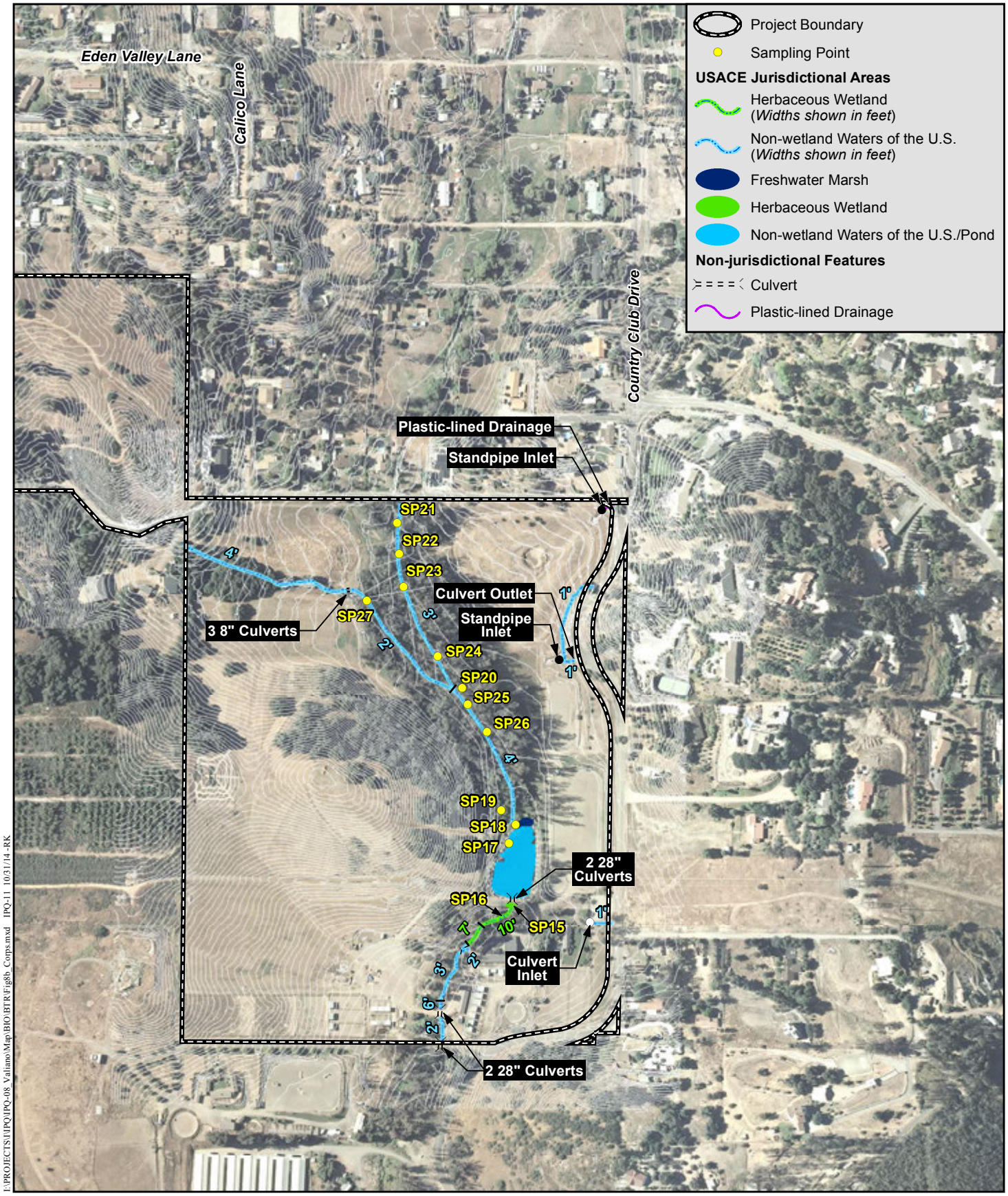
Figure 8a



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Waters of the U.S.

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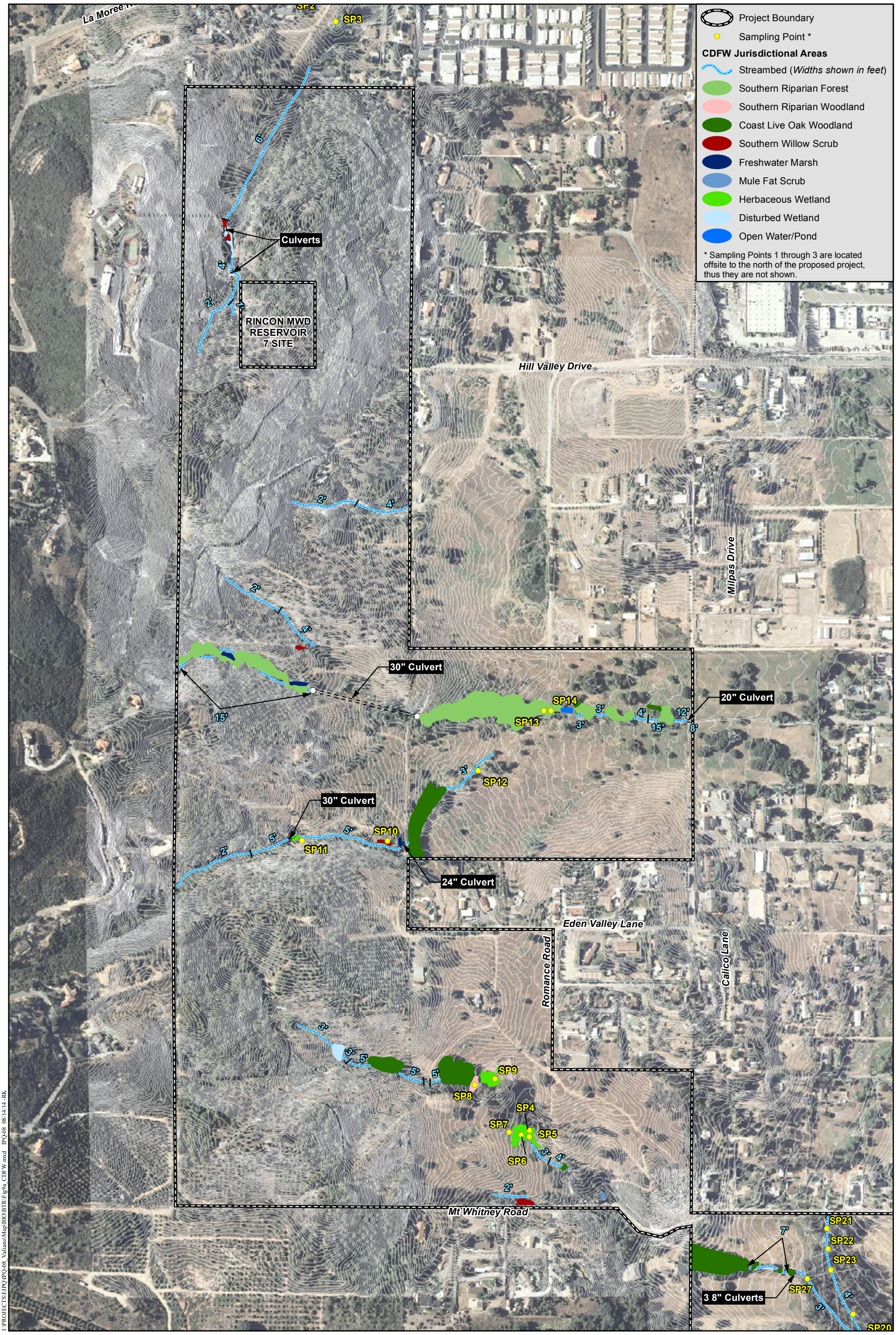
N

0 400 Feet

Figure 8b



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CDFW Jurisdictional Areas

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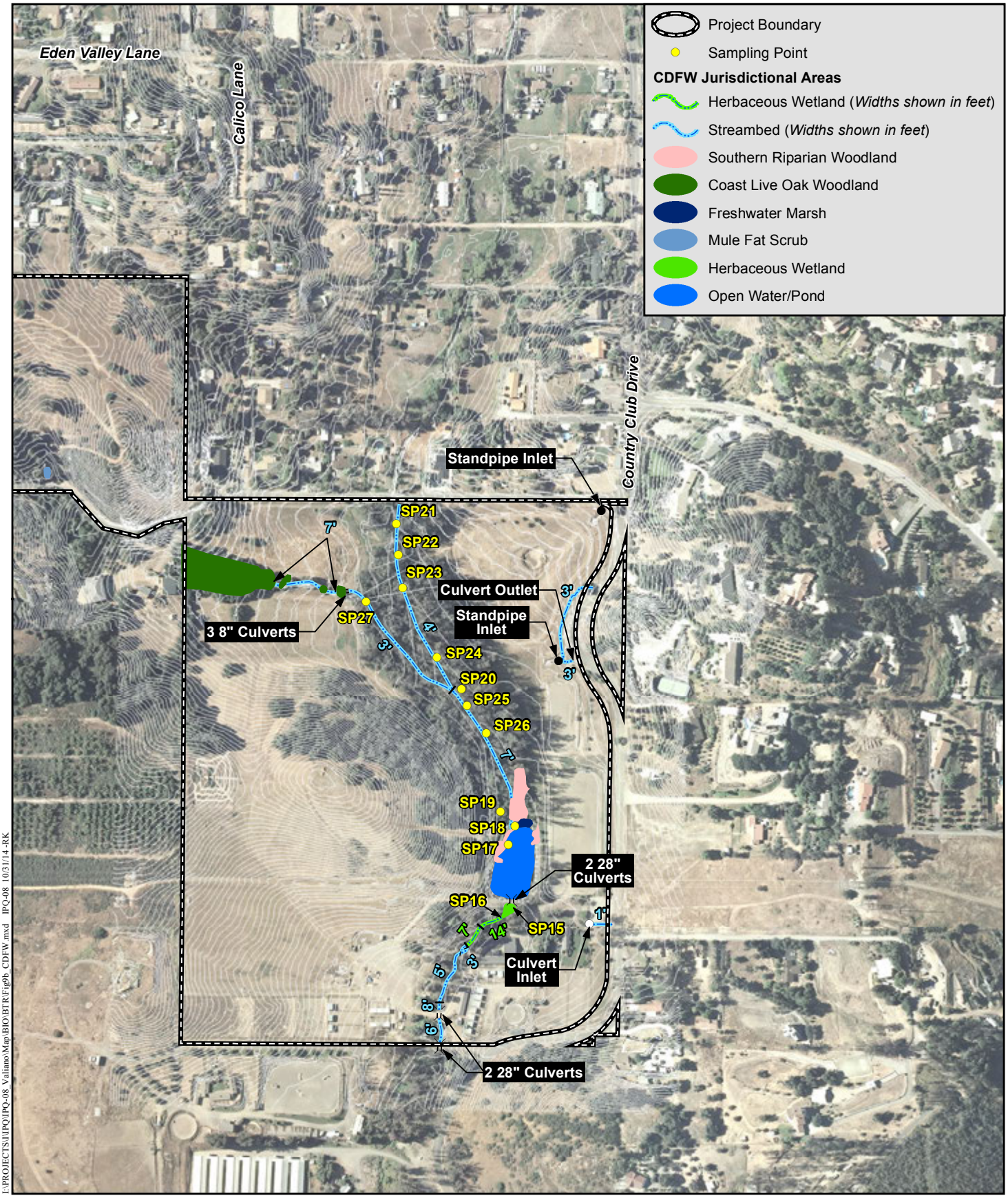
0 400 Feet

Figure 9a



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CDFW Jurisdictional Areas

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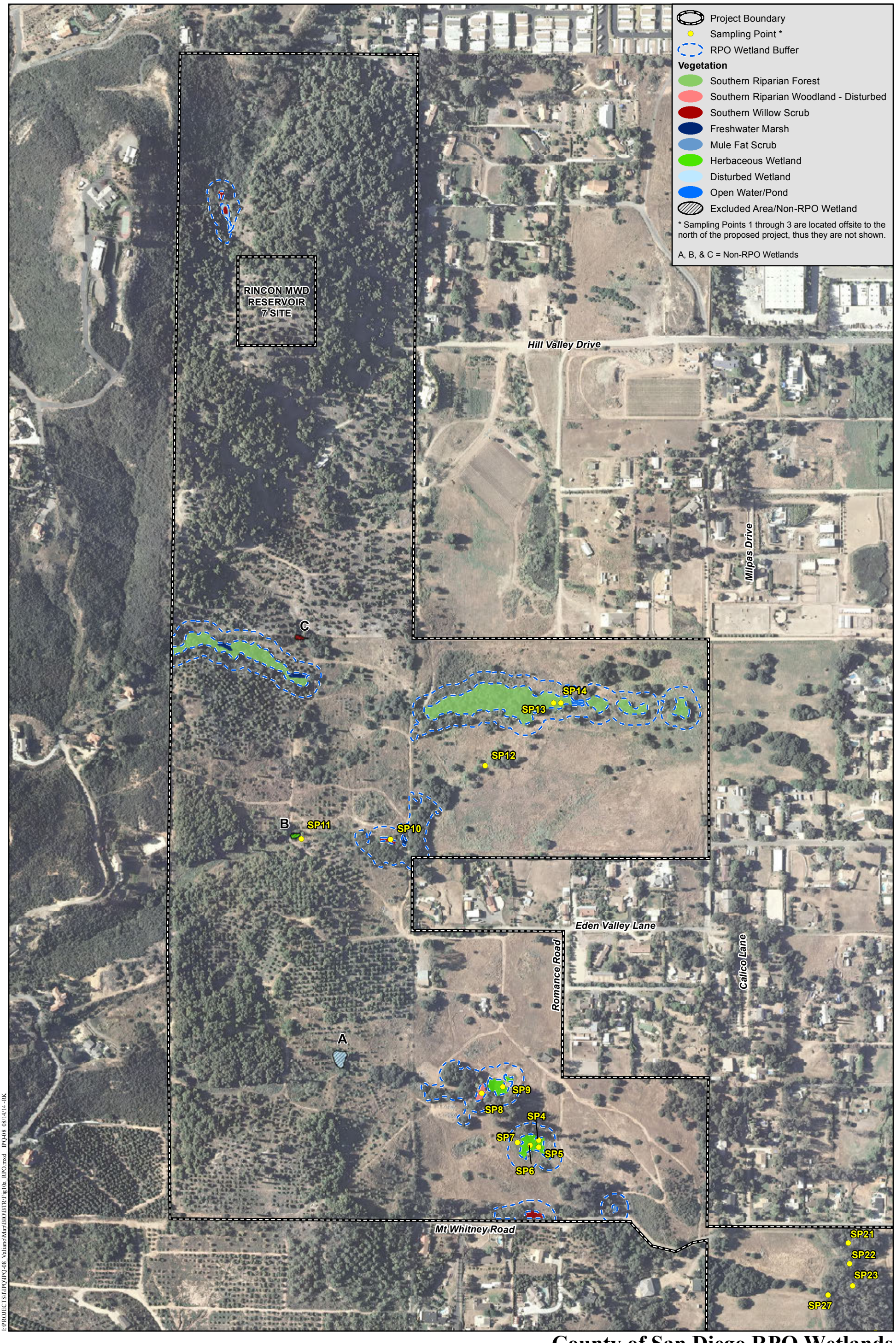
0 400 Feet

Figure 9b



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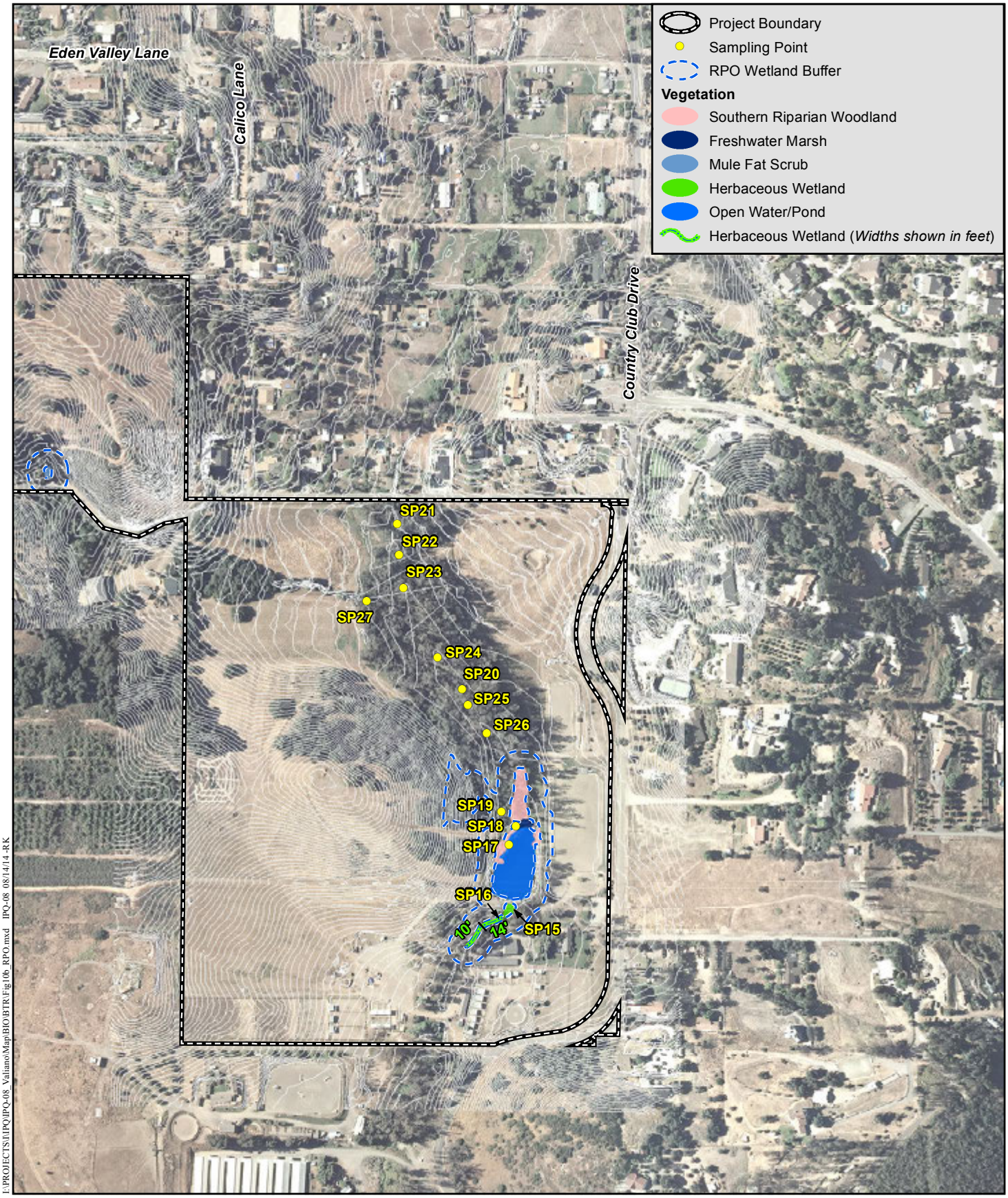
County of San Diego RPO Wetlands

VALIANO

HELIX Environmental Planning

0 400 Feet

Figure 10a



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County of San Diego RPO Wetlands

VALIANO

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N

0 400 Feet

Figure 10b

is not a vernal pool, and does not support wetland-dependent sensitive species. As such, this area does not meet RPO wetland criteria. In addition, the connecting channel is an unvegetated dirt channel that does not support hydrophytic vegetation, does not have hydric soil, and does not have a non-soil substrate. Thus, the channel is not RPO wetland.

A total of 0.02 acre of southern willow scrub occurring in the northern portion of the site in Neighborhood 4 (Area C on Figures 10a and 14a) is a human-induced wetland area resulting from adjacent orchard runoff and is small and isolated from other wetland areas, is not associated with a spring or a channel, has negligible biological functions, is not a vernal pool, and does not support wetland-dependent sensitive species. As such, this area does not meet RPO wetland criteria.

1.4.8 Habitat Connectivity and Wildlife Corridors

There are 2 types of wildlife corridors: local and regional. Local corridors provide animals with access to resources such as food, water, and shelter. Animals can use these corridors to travel from riparian to upland habitats and back. Regional corridors allow for animal movement between large core areas of habitat that are regionally important. They include major creeks and rivers, ridges, valleys, and large swaths of undeveloped land.

The Project site does not function as a regional wildlife corridor. The Project site is situated at the western edge of existing development with little opportunity for wildlife movement to the east and north due to urban sprawl within the Cities of San Marcos and Escondido, and further impeded by SR 78 and Mission Road. Construction of the Harmony Grove Village development further limits wildlife connectivity to the south of the site. Although the Project site is used by a variety of wildlife species it is not considered a regional corridor as connectivity to the north, south, and east is limited and the site does not provide connection to open space in these areas. Wildlife movement occurs locally within the site and connects to offsite habitat along the western site boundary, which abuts existing rural residential development interspersed with chaparral–covered hillsides. This off-site habitat is not within the future NCMSCP proposed PAMA. The Project site does not contain biological resources that are critical for regional movement of wildlife. There is evidence (tracks, beds, and observations) that the site provides habitat for local wildlife coming onto the site from the west.

1.5 APPLICABLE REGULATIONS

Biological resources within the Project site are subject to regulatory review by the federal government, State of California, and County. The federal government administers non-marine plant- and wildlife-related issues through the USFWS, while the USACE administers WUS (including wetland and non-wetland) issues. California law relating to wetland, water-related, and wildlife issues is administered by CDFW. The County is the lead agency for the CEQA environmental review process in accordance with state law and local ordinances.

Coordination efforts for the proposed Project to date consist of a pre-application meeting with staff from the County Department of Planning and Development Services (PDS) on August 13, 2012, a site visit with County PDS staff on June 6, 2013, a batching meeting with

staff from USFWS, CDFW, and County PDS on November 26, 2013, as well as additional meetings with County PDS staff.

Laws and regulations that apply include federal Endangered Species Act (ESA), CWA, CEQA, California Fish and Game Code, and County RPO. Under CEQA, impacts associated with a proposed Project or program are assessed with regard to significance criteria determined by the CEQA Lead Agency (in this case, the County) and pursuant to CEQA and State CEQA Guidelines.

1.5.1 Federal Government

Administered by the USFWS, the federal ESA provides the legal framework for the listing and protection of species (and their habitats) that are 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 that are 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. None of the Project site is located within designated critical habitat (Figure 7) and the Project would therefore not impact critical habitat.

Sections 7 and 10(a) of the federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' use of the site and impacts to USACE jurisdictional areas. Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a Habitat Conservation Plan (HCP). The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits. A Section 7 or 10(a) permit would not be required for the proposed Project, as no federally listed species or critical habitat occur on site.

All migratory bird species that are 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 February 1 to September 1). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the 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 WUS. Permitting for projects filling WUS (including wetlands) is overseen by the USACE under Section 404 of the CWA. Projects could be permitted on an individual basis or be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. and typically require substantial time (often longer than 6 months) to review and approve, while Nationwide Permits are pre-approved if a project meets appropriate conditions.

1.5.2 State of California

Primary environmental legislation in California is found in CEQA and its implementing guidelines (State CEQA Guidelines), which require that projects with potential adverse effects (or impacts) on the environment undergo environmental review. Adverse environmental impacts are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations.

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. California ESA Section 2081 authorizes the CDFW to enter into a memorandum of agreement for the take of listed species for scientific, educational, or management purposes.

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 follows the NPPA and covers both plants and animals designated as endangered or threatened with extinction. Plants listed as rare under NPPA were also designated rare under the California ESA.

The California Fish and Game Code (Sections 1600 through 1603) requires a CDFW agreement for projects affecting riparian and wetland habitats through issuance of a Streambed Alteration Agreement (SAA).

The California Natural Communities Conservation Planning (NCCP) Act of 1991 (Section 2835) allows the CDFW to authorize interim take of species covered by plans in agreement with NCCP guidelines. A Natural Communities Conservation Program initiated by the State of California focuses on conserving coastal sage scrub, and in concert with the USFWS and the federal ESA, is intended to avoid the need for future federal and state listing of coastal sage scrub dependent species. The County became a participant in the NCCP in 1993 for projects located within the planning area for the Coastal Sage Scrub NCCP with the intent to "…provide for regional

protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and growth." The NCCP process guidelines were established as interim guidelines until formal subregional plans were approved. An NCCP 4(d) take permit is required for the project to demonstrate compliance with the NCCP Act. The draft NCMSCP would be the subregional plan for this portion of the County of San Diego when adopted. The project area is not within the proposed PAMA and, therefore, any conserved areas on site would not become part of the NCMSCP Preserve.

1.5.3 County of San Diego

Habitat Loss Permit Ordinance

The NCCP Act (Section 2835) allows CDFW to authorize take of species covered by plans in agreement with NCCP guidelines. An NCCP initiated by the State of California under Section 4(d) of the federal ESA focuses on conserving coastal sage scrub in order to avoid the need for future federal and state listing of coastal sage scrub-dependent species. Findings in support of issuance of a habitat loss permit under Section 4(d) of the federal ESA would need to be made if Section 4(d) is relied upon for this proposed Project (Section 86.104 of the County of San Diego Code 8365 (N.S.) and Section 4.2.g of the Coastal Sage Scrub Natural Communities Conservation Plan Process Guidelines). These findings need to show that the proposed Project's loss of Diegan coastal sage scrub would not exceed the County's 5 percent loss limit. It would also have to demonstrate that the habitat loss would not preclude connectivity between areas of high habitat values, or preclude or prevent the preparation of a subregional NCCP. Additionally, the findings must show that the habitat loss has been minimized and mitigated to the maximum extent practicable in accordance with Section 4.3 of the NCCP Process Guidelines, and that the habitat loss would not appreciably reduce the likelihood of survival and recovery of listed species in the wild. Finally, the habitat loss must be incidental to otherwise lawful activities. The County regulates coastal sage scrub habitat loss through the Habitat Loss Permit (HLP) Ordinance (October 22, 1997). An HLP application must be filed with the County if the Draft NCMSCP plan has not been adopted. An HLP requires concurrence from USFWS and CDFW. Approval is based on Findings made pursuant to the County's HLP Ordinance (County 1993b), as required by the NCCP Process Guidelines.

Resource Protection Ordinance

The County regulates natural resources (among other resources) via the RPO, the regulations of which cover wetlands, wetland buffers, sensitive plants and animals, sensitive habitats, and habitats containing sensitive animals or plants as sensitive biological resources. Wetland habitats are defined per the RPO, as described in Section 1.3.4, above. Sensitive habitat lands are identified by the RPO as lands that "support unique vegetation communities, or habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the CEQA Guidelines." 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.

RPO wetlands are defined according to the RPO as lands having one or more of the following attributes:

- At least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places);

- The substratum is predominantly undrained hydric soil; or

- 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.

According to the RPO, the following are not considered RPO wetlands:

- Lands which have attribute(s) specified above, solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Director of PDS determines that they:

    - Have negligible biological function or value as wetlands;
    - Are small and geographically isolated from other wetland systems;
    - Are not vernal pools; and
    - Do not have substantial or locally important populations of wetland dependent sensitive species.

- Lands that have been degraded by past legal land disturbance activities, to the point that they meet the following criteria as determined by the Director of PDS:

    - Have negligible biological function or value as wetlands even if restored to the extent feasible; and,
    - Do not have substantial or locally important populations of wetland dependent sensitive species.

The site contains 3.99 acres of RPO wetlands (Table 5) as freshwater marsh, herbaceous wetland, mule fat scrub, disturbed wetland, open water/pond, southern riparian forest, southern riparian woodland (including disturbed), and southern willow scrub.

2.0 PROJECT EFFECTS

Direct impacts are immediate impacts resulting from permanent habitat removal. Direct impacts were quantified by overlaying the limits of all project-related impacts on the biological resources map of the site. 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. These are called edge effects and can be temporary during construction or part of the operation of the project during the life of the

residential development. Edge effects can result from increased noise, unauthorized trampling of habitat, introduction of pets and pest plants to open space areas, and effects of irrigation and lighting. 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 PLANT SPECIES

As previously stated, no sensitive plant species were observed on site during surveys. The potential for sensitive plant species to occur on site is included in Appendix C. An explanation of status codes is provided in Appendix E.

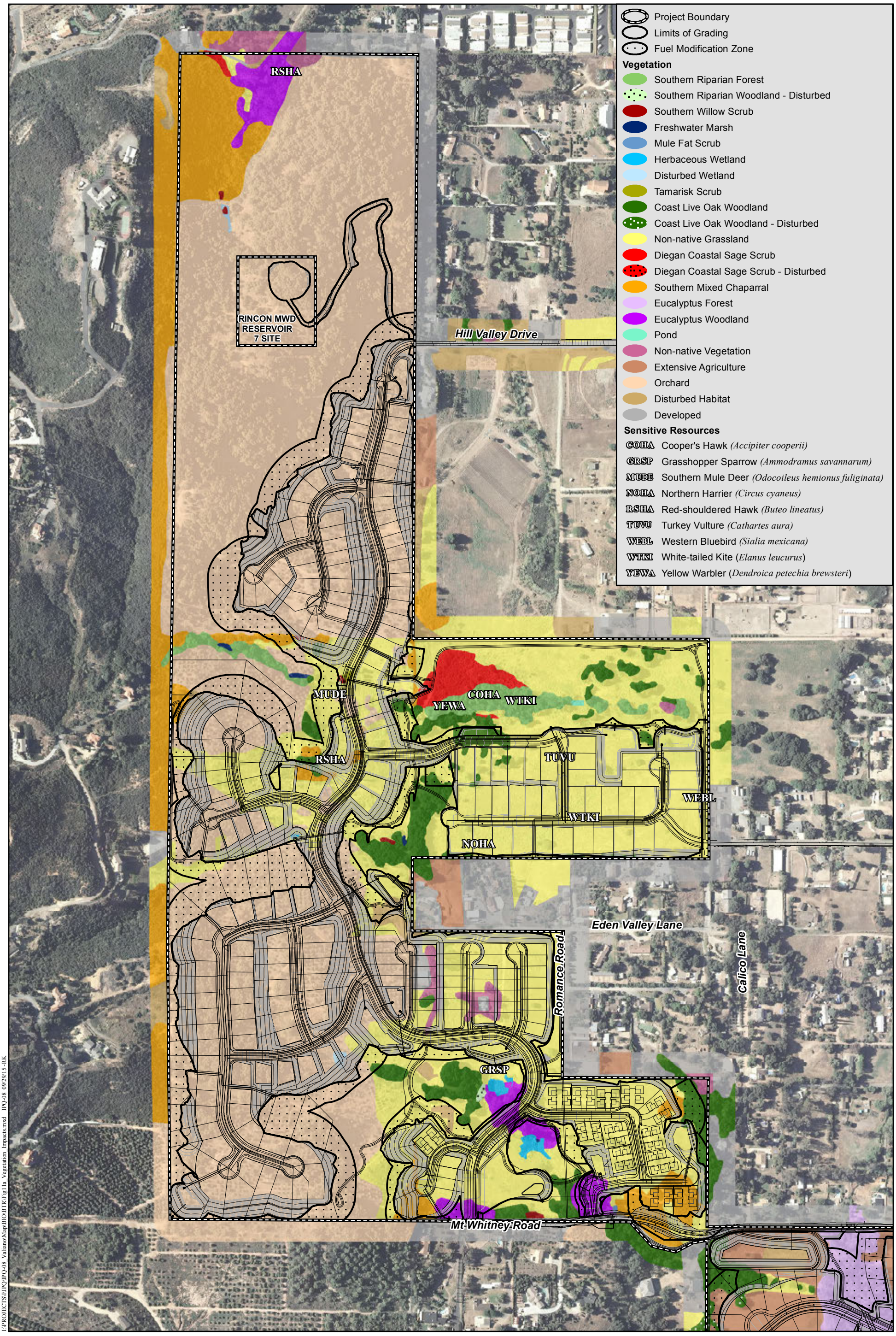
2.2 SPECIAL STATUS ANIMAL SPECIES

A total of ten sensitive animal species were observed on site during surveys (Cooper's hawk, grasshopper sparrow, red-shouldered hawk, turkey vulture, northern harrier, white-tailed kite, prairie falcon, southern mule deer, yellow warbler, and western bluebird). The potential for additional sensitive animal species to occur on site is included in Appendix D. An explanation of status codes is provided in Appendix E. Sensitive species status was taken from CDFW (2009 and 2010).

2.3 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITIES

The proposed Project would result in direct impacts to 159.9~~164.9~~ acres of on-site vegetation communities, which include all areas occurring within Fuel Modification Zones 1 and 2 (Table 6, Figures 11a and 11b). ~~Of that total~~ On-site impacts to ~~, 64.9 acres are~~ sensitive vegetation communities total 59.3 acres, including: ~~0.17 acre of southern riparian forest,~~ 0.04 acre of southern willow scrub, 0.01 acre of mule fat scrub, 0.02 acre of herbaceous wetland, 0.08 acre of disturbed wetland, 6.2~~6.7~~ acres of coast live oak woodland, ~~1.0~~0.2 acre of Diegan coastal sage scrub, 3.0~~3.1~~ acres of southern mixed chaparral, and 49.7~~53.8~~ acres of non-native grassland (Table 6, Figures 11a and 11b). Impacts to County-defined oak woodland buffer include 0.8 acre of non-native grassland, 0.1 acre of eucalyptus woodland, and 0.1 acre of combined extensive agriculture, southern mixed chaparral, and eucalyptus forest communities (Figure 11c).

In addition to the on-site effects on ~~non-sensitive~~ vegetation communities, the Project would affect 1.9~~1.5~~ acres of off-site area to install required infrastructure, including widening of Country Club Drive west of Auto Park Way. The off-site impacts directly surrounding the Project site total 1.5 acre and are comprised entirely of disturbed and developed lands, including 0.1 acre of disturbed habitat and 1.4 acres of developed land (Figures 11a and 11b). These ~~O~~off-site improvements would not impact any sensitive vegetation communities. Off-site improvements associated with the widening of Country Club Drive west of Auto Park Way would impact 0.4 acre, including 0.2 acre of non-native grassland, 0.1 acre of disturbed habitat, and 0.1 acre of developed land (Figure 11d). A total of 59.5 acres of sensitive vegetation communities, including on- and off-site areas, would be directly impacted by the Project.



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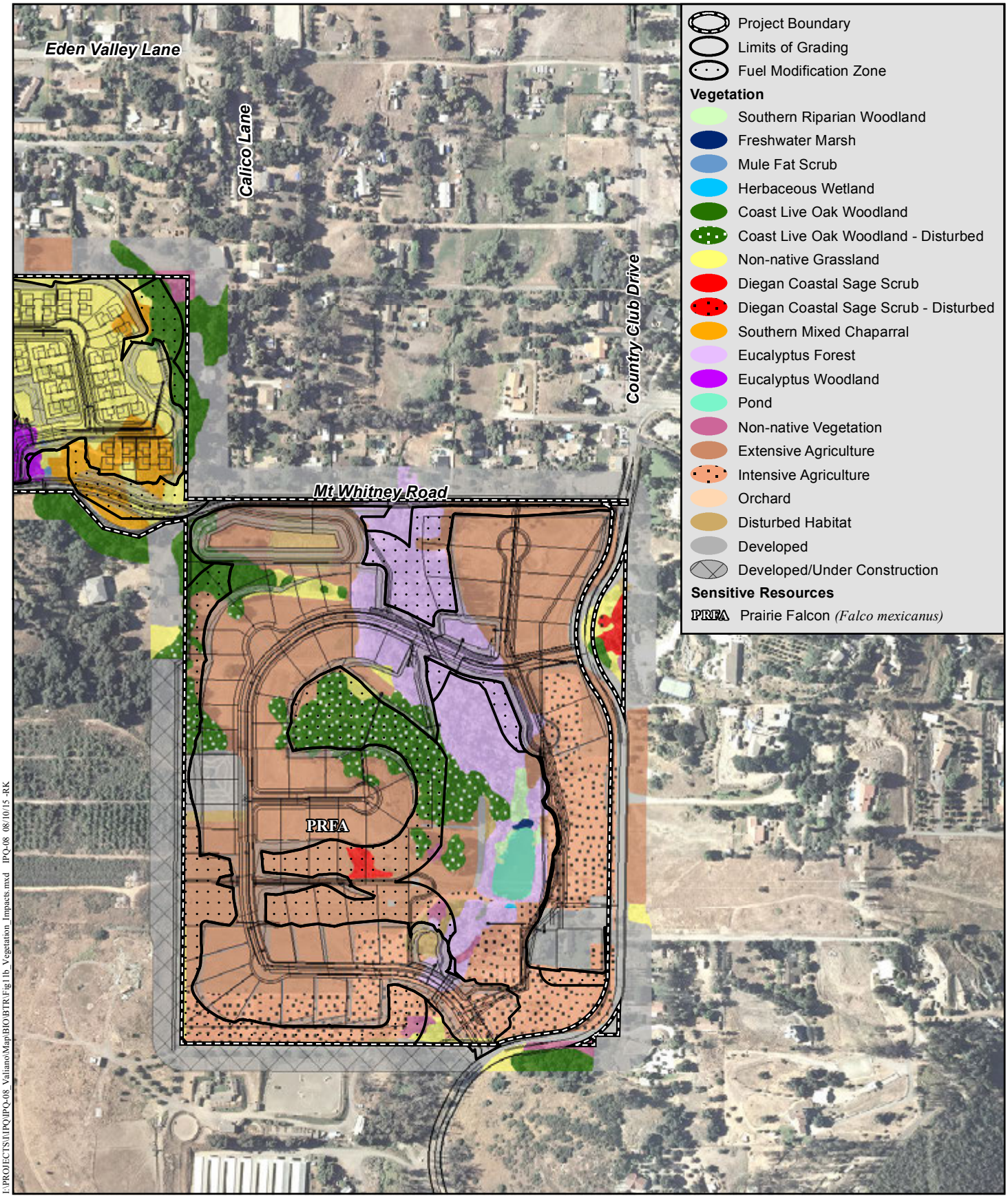
Vegetation and Sensitive Resources/Impacts

VALIANO

HELIX Environmental Planning

N 0 400 Feet

Figure 11a



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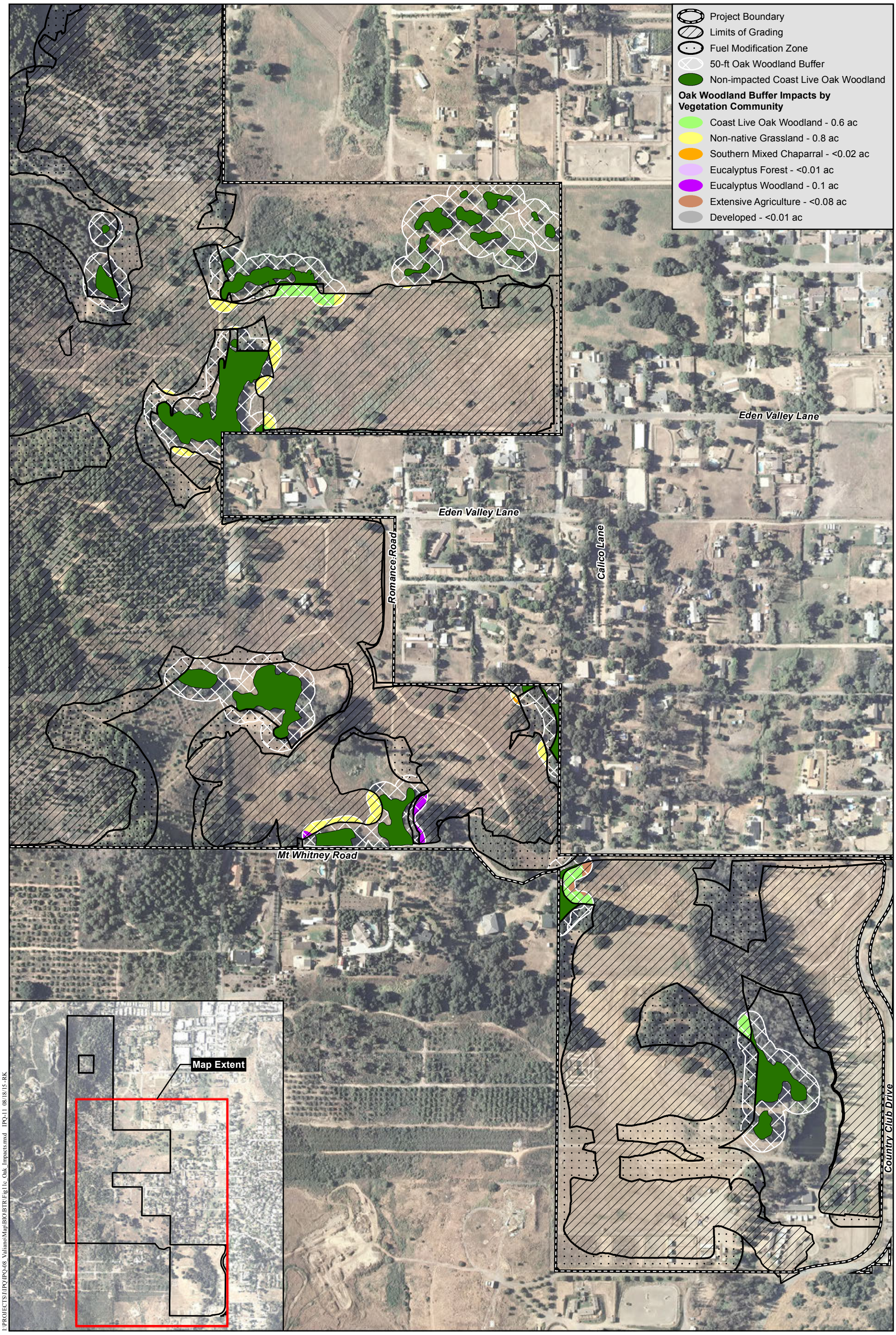
Vegetation and Sensitive Resources/Impacts

VALIANO

HELIX Environmental Planning

N 0 400 Feet

Figure 11b



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Oak Woodland Buffer Impacts

VALIANO

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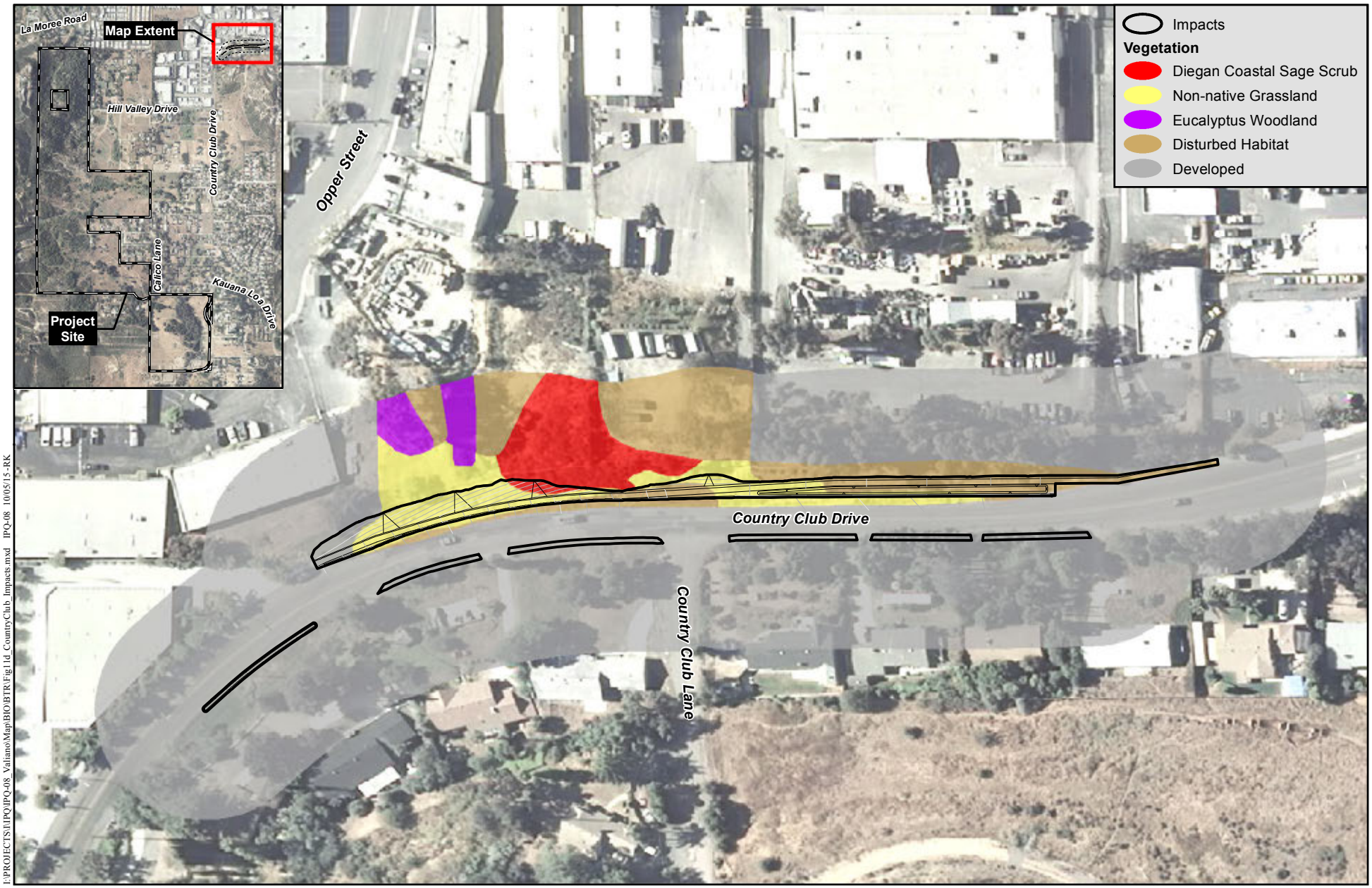
N 0 350 Feet

Figure 11c



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Vegetation/Country Club Drive Improvements

VALIANO

HELIX Environmental Planning

N 0 125 Feet

Figure 11d

Table 6
IMPACTS TO HABITAT/VEGETATION COMMUNITIES[1]~~†~~

VEGETATION COMMUNITY[2]~~*~~	ACRE(S)[3]~~**~~		
	On-Site	Off-Site	Total
Southern Riparian Forest (61300)	~~0.17~~0	0	~~0.17~~0
Southern Riparian Woodland – including disturbed (62000)	0	0	0
Southern Willow Scrub (63320)	0.04	0	0.04
Mule Fat Scrub (63310)	0.01	0	0.01
Freshwater Marsh (63310)	0.00	0	0.00
Herbaceous Wetland (52510)	0.02	0	0.02
Disturbed Wetland (11200)	0.08	0	0.08
Tamarisk Scrub (63810)	0.04	0	0.04
Coast Live Oak Woodland – including disturbed (71160)	6.2~~7~~[4]~~‡~~	0	6.2~~7~~
Diegan Coastal Sage Scrub – including disturbed (32500)	~~1.0~~ 0.2	0[7]	~~1.0~~0.2
Southern Mixed Chaparral – including disturbed (37121)	3.0~~1~~	0	3.0~~1~~
Eucalyptus Forest (79100)	4.6	0	4.6
Eucalyptus Woodland (79100)	1.3~~4~~	0	1.3~~4~~
Non-native Grassland (42200)	~~53.8~~ ~~49.7~~[5,8]	~~0~~0.2	~~53.8~~49.9
Non-native Vegetation (11000)	1.0	0	1.0
Orchard (18100)	62.0[6]~~60.6~~	0	~~60.6~~62.0
Intensive Agriculture (18200)	6.9	0	6.9
Extensive Agriculture (18300)	20.3~~5~~	0	20.3~~5~~
Disturbed Habitat (11300)	2.1	~~0.1~~0.2	~~2.2~~2.3
Developed Land (12000)	2.~~49~~	~~1.4~~1.5	3.9~~4.3~~
TOTAL	**~~164.9~~159.9**	**~~1.5~~1.9**	**~~166.4~~161.8**

~~†~~ [1] All areas within Fuel Modification Zones 1 and 2 are included as impacts.

~~*~~ [2] Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008).

~~**~~ [3] Upland habitats are rounded to the nearest 0.1 acre and wetland habitats to the nearest 0.01 acre, thus, totals reflect rounding.

~~‡~~ [4] Direct development impacts to coast live oak woodland comprise ~~2.4~~2.6 acres; the remaining 3.6~~4.3~~ acres of impact are within fuel modification zones. Of the 3.6~~4.3~~ acres within the fuel modification zones, 2.1~~4~~ acres of coast live oak woodland are within the Limited Building Zone around the Biological Open Space and would be placed within an Oak Tree Protection Easement that limits fire clearing to the understory and prohibits removal of mature oak trees.

[5] Includes 0.8 acre of grassland impact within the County's 50-foot oak woodland buffer (Figure 11d).

[6] Includes 1.6 acres of orchard impact within the Rincon MWD R7 Reservoir site and associated access road.

[7] 0.01 acre of Diegan coastal sage scrub would be impacted. This does not change the total impacts, which have been rounded to the nearest tenth acre.

[8] An additional 0.5-acre of non-native grassland habitat in Neighborhood 3 biological open space would be revegetated to coast live oak woodland as partial mitigation for impacts to CDFW oak woodland. The understory would remain open and the planted oaks would take several years to reach maturity, thus continuing to provide suitable raptor foraging habitat, in addition to nesting and roosting sites. Because like-functioning habitat would be provided, grassland mitigation is not required for revegetating this area of grassland to oak woodland.

The project may also implement one of three possible off-site sewer options: (1) Escondido option, (2) Vallecitos option, and (3) Harmony Grove option, further discussed below.

Off-site Sewer Option 1: Connection to the City of Escondido (City) Hale Avenue Resource Recovery Facility (HARRF)
(Via an out-of-service agreement between the County and City)

This potential option involves the following off-site facilities/activities:

1. Installation of approximately 2,700 linear feet of new sewer main from the new LS-12 on the Project site to an existing City pump station (LS-12), with these facilities to be located within existing City and County streets. This line will be owned and operated by the City.

2. Installation of approximately 1,600 linear feet of new force main pipeline from the Project site to an existing City sewer line, with the new facilities to be located within an existing SDG&E easement. This line will be owned and operated by the City.

3. Abandonment of approximately 1,600 linear feet of existing sewer force main located in an existing City easement. The abandonment of the force main is anticipated to be slurry fill of the line; force main removal is not anticipated.

4. Installation of approximately 200 linear feet of new recycled water pipeline from the proposed Rincon Del Diablo MWD (District) RW Pipeline, to be constructed as part of the Harmony Grove Village development, to the Project site, with the new facilities to be located within City streets. This line will be owned and operated by the District. The District's existing RW system will convey RW from HARRF to the vicinity of Country Club Drive and the SDG&E easement.

5 RW water from HARRF can also be stored in the Wet Weather Storage on the project site through the existing off-site RW system and the proposed RW backbone system through the Project. This will allow the City to reduce peak wet weather impacts on the City's land outfall. The backbone RW system will include a pipeline through the main arterial street in the northern portion of the Project, then, east in Mt. Whitney Road, south on Country Club Drive to the connection with the existing RW system in the vicinity of the SDG&E easement and the new LS-12.

6 Installation of approximately 1,000 linear feet of a new sewer return line from the Wet Weather Storage to the new gravity sewer main in Country Club Drive as identified in Item 1 above. This line will be within existing County streets and will be owned and operated by the City.

Off-site Sewer Option 2: Connection to Vallecitos Water District (VWD) Facilities
(Via annexation into the VWD for sewer service only)

This potential option would involve the installation of approximately 3,400 linear feet of new force main from the Project site to an existing VWD pipeline. This would require four on-site pump stations. One sewer lift station will be private and owned and operated by the Valiano HOA. The three larger lift stations will be owned and operated by the VWD and will have back-up generators. The on-site sewer system will be owned and operated by VWD.

Existing VWD pipelines would need to be upgraded as follows:

- Approximately 3,200 linear feet of pipeline through the mobile home park and on Barham Drive
- Approximately 500 linear feet of pipeline under SR-78 from Barham Drive to Rancheros Drive

Additional facilities that may require upgrading have been identified in the VWD *Water, Wastewater and Recycled Water Master Plan* (November 2010) and may be required as a condition of development by VWD or contribution through annexation and connection fees. The VWD *Water, Wastewater, and Recycled Water Master Plan Final Program EIR SCH No. 2010071073* (March 2011) includes the following capital improvement projects.

- SP-2 – replace 3,200 linear feet of 21-inch sewer with 39-inch sewer
- SP-11 – replace 1,400 linear feet of 21-inch sewer with 36-inch, and install 800 linear feet of 8-inch sewer
- SP-12 – replace 2,000 linear feet of 21-inch sewer with 36-inch
- Possible improvements to the Land Outfall

Off-site Sewer Option 3: Connection to the Harmony Grove Water Reclamation Facility
(Expansion of the County Harmony Grove Sewer Service Area)

This potential option involves: (1) the installation of approximately 5,100 linear feet of force main from the Project Sewer Lift Station site to the Harmony Grove water reclamation facility (WRF), with these facilities to be located within existing City/County streets; and (2) the construction of a new pump station and backup power generator at the Valiano Sewer Lift Station site. The County would own and operate the sewer lift station.

This option will require working with the County on modifications to the WRF design criteria and potentially re-rating the design flow at the WRF to include the Project's sewer flows.

Implementation of any of the 3 off-site sewer options described above would not impact sensitive vegetation communities. Further discussion of the off-site sewer options and surrounding biological resources is provided in Appendix H.

2.4 JURISDICTIONAL WETLANDS AND WATERWAYS

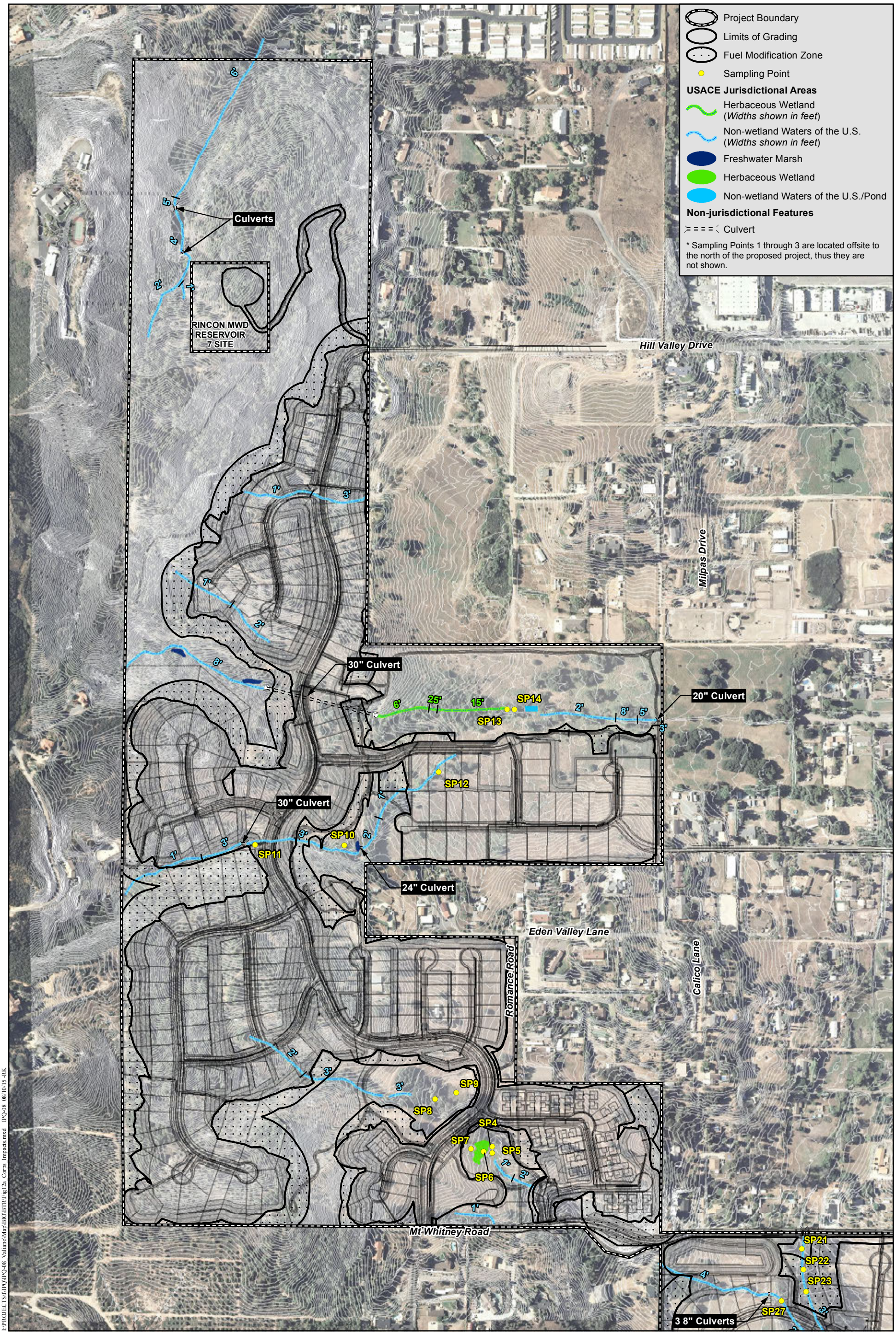
The proposed Project would impact 0.19~~0.21~~ acre of WUS, comprised entirely of ~~0.02 acre of herbaceous wetland and 0.19 acre of~~ non-wetland WUS (Table 7; Figures 12a and 12b).

The proposed Project would affect 0.76~~0.92~~ acre of CDFW jurisdictional areas comprised of 0.50~~0.66~~ acre of wetland or riparian habitat (~~0.14 acre of southern riparian forest, 0.39~~ 0.38 acre of coast live oak woodland, 0.02 acre of southern willow scrub, ~~0.01 acre of mule fat scrub,~~ 0.02 acre of herbaceous wetland, and 0.08 acre of disturbed wetland) and 0.26 acre of streambed (Table 7; Figures 13a and 13b).

The proposed Project would affect 0.01~~0.18~~ acre of County RPO wetlands comprised of ~~0.17 acre of southern riparian forest and 0.01 acre of~~ a single stand of mule fat scrub (Table 7; Figures 14a and 14b). Proposed impacts to 0.01~~0.18~~ acre of RPO wetlands would be consistent with the findings in RPO Section 86.604(a)(5) for the following reasons:

- Impacts to 0.01 acre of RPO mule fat scrub adjacent to the northern edge of Mt. Whitney Road are unavoidable because improvements to this existing road are required for project approval. There is no feasible alternative that avoids the mule fat scrub because of its location directly adjacent to the existing roadway. The road would be widened to County standards and all clearing and grading would be performed outside the avian breeding season. Mitigation would occur at a minimum 3:1 ratio with a minimum 1:1 creation component.

- ~~Impacts to 0.17 acre of RPO southern riparian forest in Neighborhood 3 would result from a necessary road crossing to access the Project site. This primary road access off of Eden Valley Lane would enter into Neighborhood 3 and cross southern riparian forest to provide necessary ingress/egress for the site. No feasible alternative avoids the wetland due to site grading constraints. Alternate routes are infeasible due to a 50-foot elevation change between the southwest corner of Neighborhood 3 and the southeast corner of Neighborhood 2. Additionally, the road crossing would be a circulation element that is critical for emergency vehicle access through the community. This single crossing would be the minimum feasible for this area and would be mitigated at a minimum 3:1 ratio with a minimum 1:1 creation component. All clearing and grading would be performed outside the avian breeding season.~~



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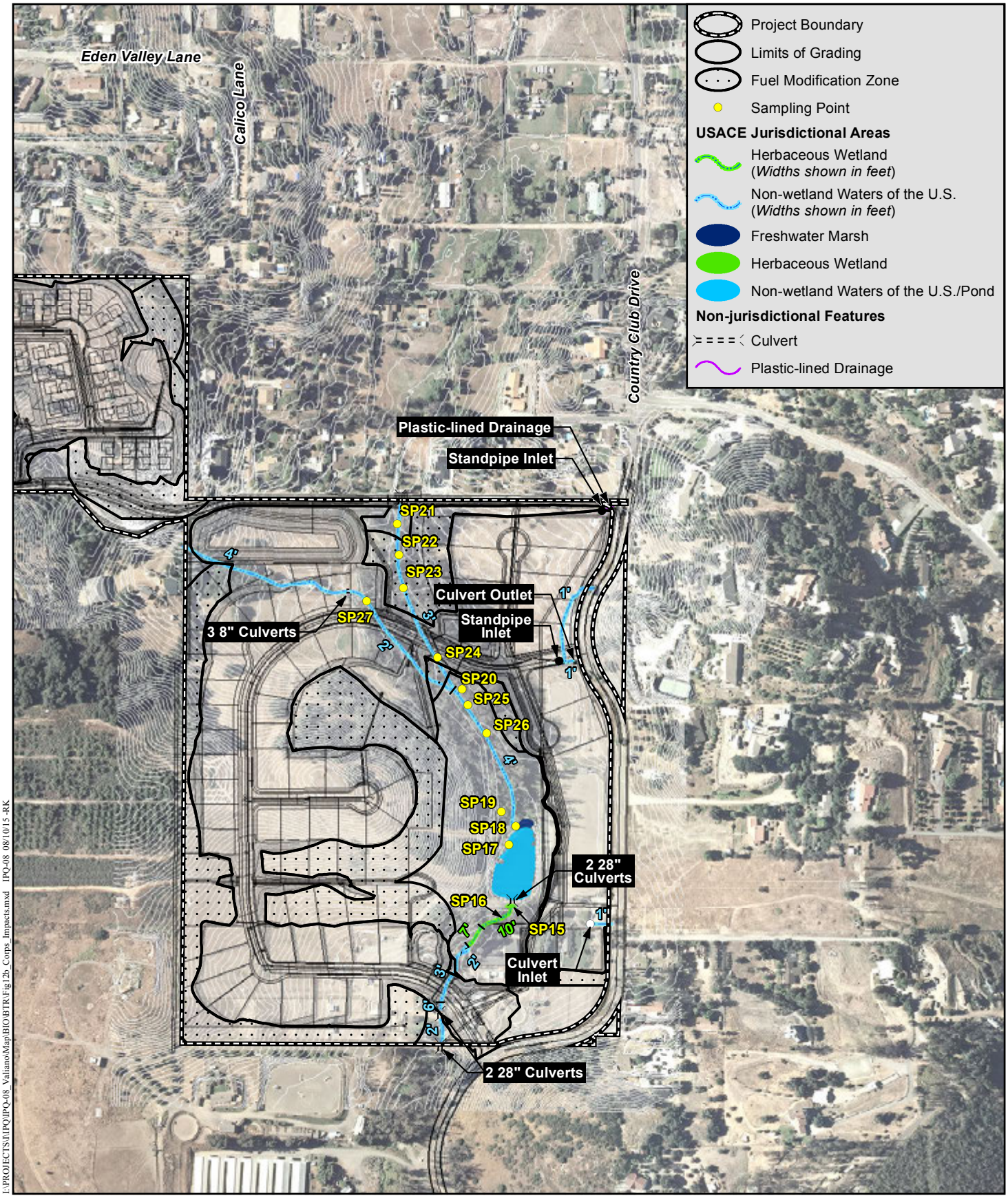
Waters of the U.S./Impacts

VALIANO

HELIX Environmental Planning

Figure 12a



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Waters of the U.S./Impacts

VALIANO

HELIX Environmental Planning

N

0 400 Feet

Figure 12b

Project Boundary
Limits of Grading
Fuel Modification Zone
Sampling Point *

CDFW Jurisdictional Areas

Streambed (*Widths shown in feet*)
Southern Riparian Forest
Southern Riparian Woodland
Coast Live Oak Woodland
Southern Willow Scrub
Freshwater Marsh
Mule Fat Scrub
Herbaceous Wetland
Disturbed Wetland
Open Water/Pond

* Sampling Points 1 through 3 are located offsite to the north of the proposed project, thus they are not shown.

Culverts
RINCON MWD RESERVOIR 7 SITE
Hill Valley Drive
Milpas Drive
30" Culvert
20" Culvert
24" Culvert
30" Culvert
Eden Valley Lane
Calico Lane
Romance Road
Mt Whitney Road
3 8" Culverts
SP1
SP2
SP3
SP4
SP5
SP6
SP7
SP8
SP9
SP10
SP11
SP12
SP13
SP14
SP21
SP22
SP23
SP27

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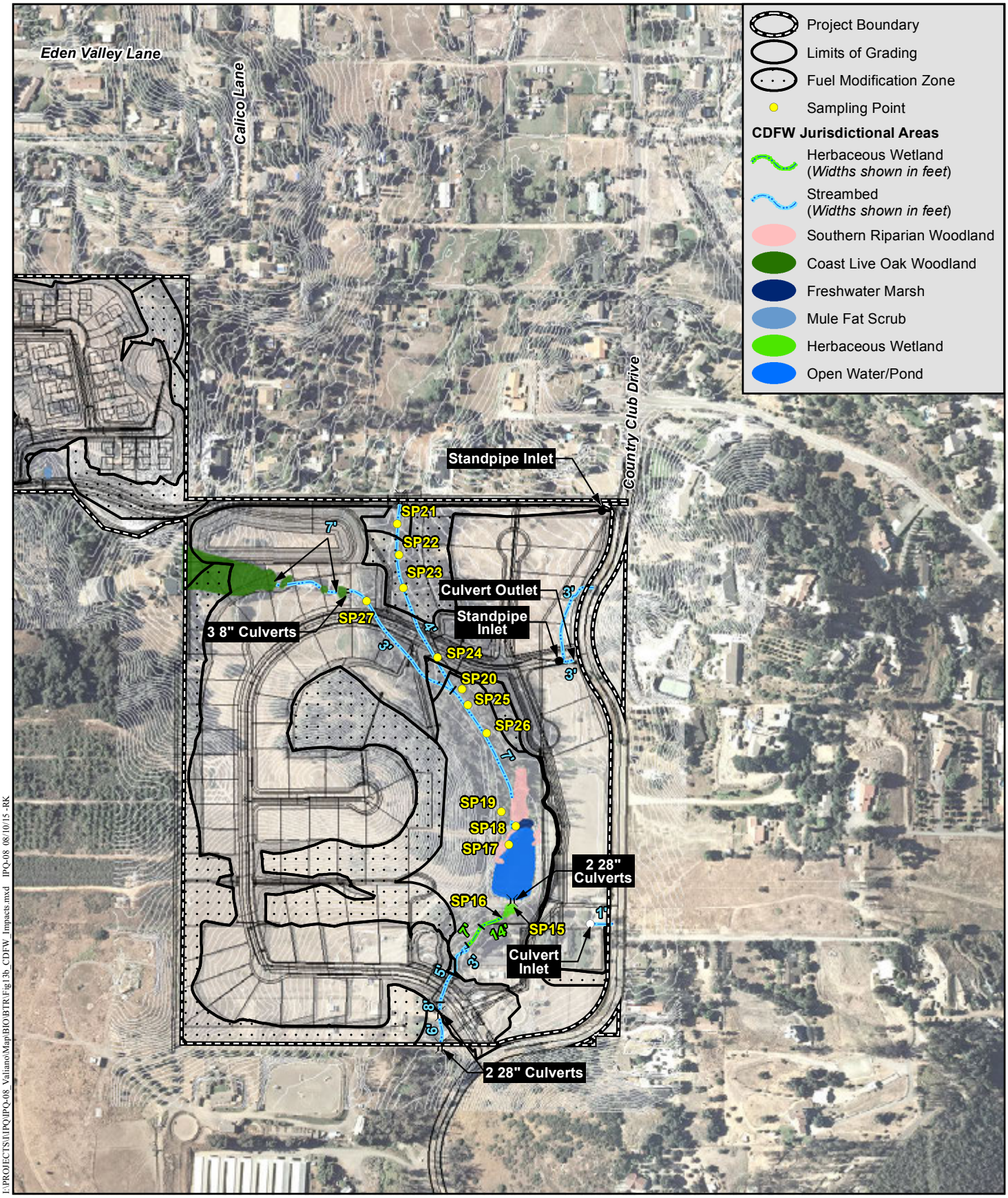
CDFW Jurisdictional Areas/Impacts

VALIANO

HELIX Environmental Planning

N 0 400 Feet

Figure 13a



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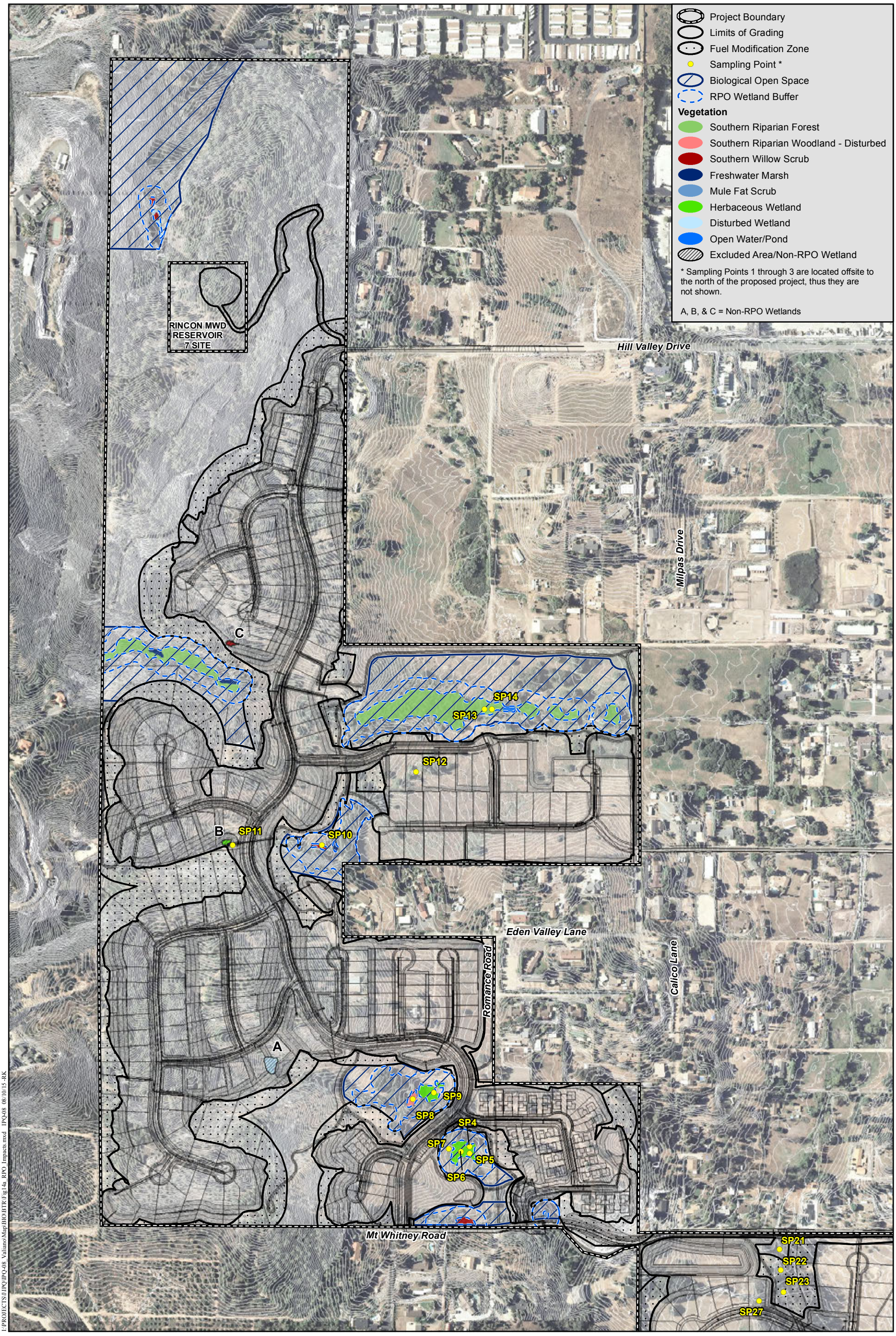
CDFW Jurisdictional Areas/Impacts

VALIANO

HELIX Environmental Planning

N 0 400 Feet

Figure 13b



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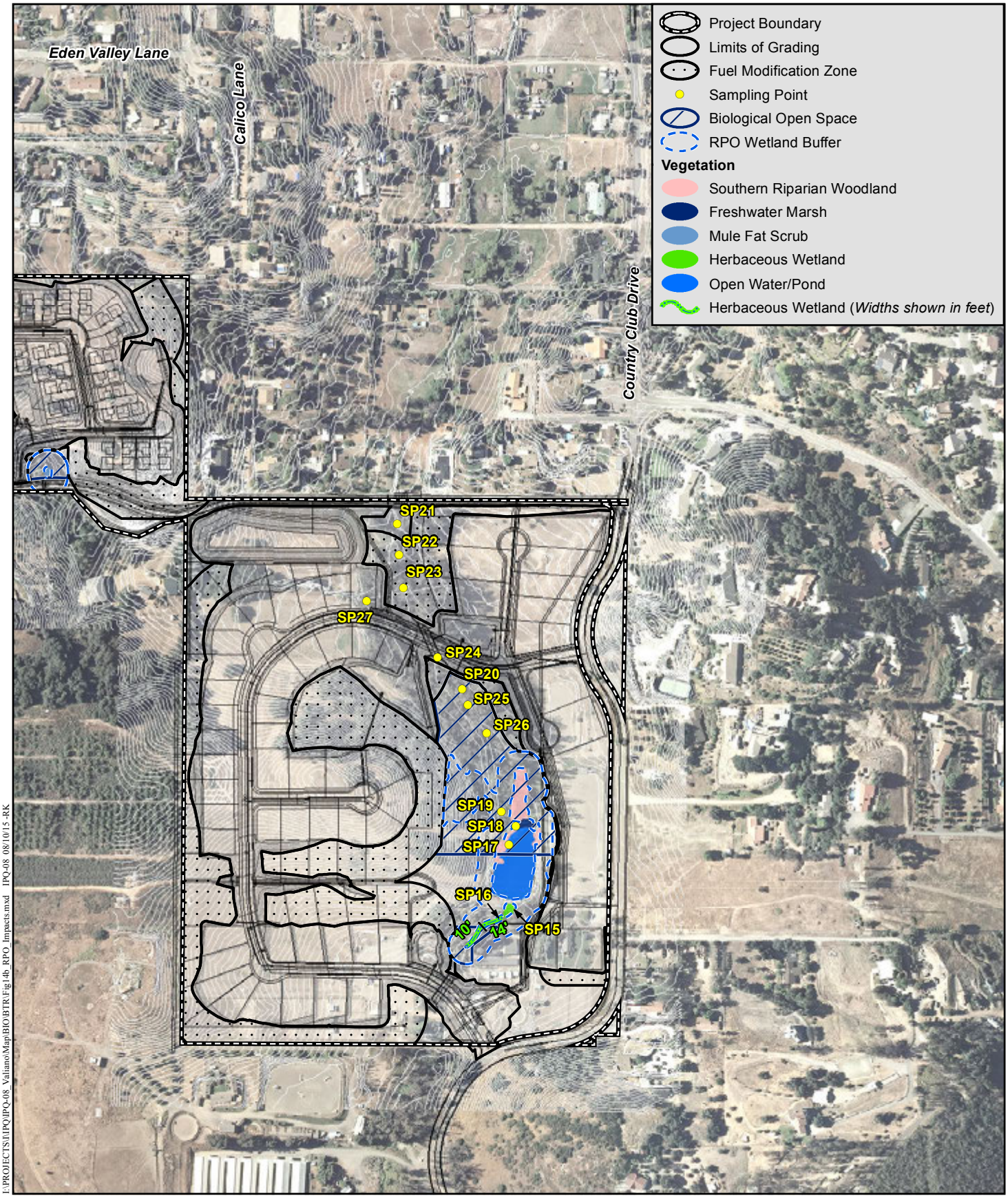
County of San Diego RPO Wetlands/Impacts

VALIANO

HELIX Environmental Planning

N 0 400 Feet

Figure 14a



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County of San Diego RPO Wetlands/Impacts

VALIANO

HELIX Environmental Planning

N

0 400 Feet

Figure 14b

Table 7 IMPACTS TO JURISDICTIONAL WETLANDS AND WATERWAYS (acre[s])*			
HABITAT	**WATERS OF U.S.**	**CDFW**	**COUNTY RPO**
Wetlands/Riparian			
Southern Riparian Forest	--	~~0.14~~--	~~0.17~~--
Southern Riparian Woodland	--	--	--
Coast Live Oak Woodland	--	0.38~~0.39~~	--
Southern Willow Scrub	--	0.02	--
Mule Fat Scrub	--	~~0.01~~--	0.01
Freshwater Marsh	--	--	--
Herbaceous Wetland	~~0.02~~--	0.02	--
Disturbed Wetland	--	0.08	--
Subtotal	**~~0.02~~--**	**0.50~~0.66~~**	**0.01~~0.18~~**
Non-wetland Waters			
Non-wetland WUS/Streambed	0.19	0.26	--
Open Water/Pond	--	--	--
Subtotal	0.19	0.26	--
TOTAL	**0.19~~0.21~~**	**0.76~~0.92~~**	**0.01~~0.18~~**

*Areas are presented in acre(s) rounded to the nearest 0.01.

2.5 WILDLIFE MOVEMENT AND NURSERY SITES

The site is not part of a regional corridor, but presently has characteristics of a local corridor. The site does not serve as a nursery site.

2.6 INDIRECT IMPACTS

Potential indirect impacts from construction noise, human access, domestic animals, exotic plant species, ~~and~~ lighting, and increased roadkill of wildlife may occur as a result of project implementation; further discussed below and in Sections 3.1.H and 3.1.L.

2.6.1 Noise

Construction-related noise from such sources as clearing and grading would be a temporary impact to wildlife. Breeding birds and mammals may temporarily or permanently leave their territories to avoid disturbances from construction activities, which could lead to reduced reproductive success and increased mortality. Potential short-term noise impacts could result from construction for the proposed Project. Noise effects would be considered significant if construction noise levels exceed a level of 60 dB L_{EQ} hourly average or ambient adjacent to ground- or tree-nesting raptor nests during the raptor breeding season (February 1 to July 15).

2.6.2 Human Access

Increases in human activity in the area could result in degradation of open space habitat and associated indirect impacts on sensitive species through the creation of unauthorized trails and removal of vegetation. In addition, illegal dumping of lawn and garden clippings, trash, and

other refuse could occur. Resulting habitat degradation and effects on sensitive species in open space areas could result in a significant impact.

2.6.3 Domestic Predators

The project is residential in nature, so domestic predators (e.g., dogs and cats) may be introduced to the surrounding habitat. Although such introductions have potential to harm native wildlife species, the site is adjacent to existing rural residential development and is already subject to some level of disturbance and predation by domestic animals.

2.6.4 Exotic Plant Species

Non-native plants could colonize areas disturbed by construction and development and could potentially spread into adjacent native habitats. Many non-native plants are highly invasive and can displace native vegetation (reducing native species diversity), potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native wildlife dependent on native plant species.

2.6.5 Lighting

Night lighting that extends from a developed area onto adjacent wildlife habitat can discourage nocturnal wildlife in habitat and can provide nocturnal predators with an unnatural advantage over their prey, resulting in a potentially significant impact.

2.6.6 Road Kill

Project implementation may result in increased road kill of wildlife. Road kill impacts would be considered significant if they result in adverse effects on federal or state listed species.

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 (County 2010b)?

Any of the following conditions would be considered significant if:

A. The Project would impact 1 or more individuals of a species listed as federally or state endangered or threatened.

B. The Project would impact an on-site population of a County List 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 local long-term survival of a County List C or D plant species or a County Group 2 animal species.

D. The Project may impact arroyo toad aestivation, foraging, 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, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species.

H. The Project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term.

I. The Project would impact occupied burrowing owl habitat.

J. The Project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.

K. The Project would impact occupied Hermes copper butterfly habitat.

L. The Project would impact nesting success of the following sensitive bird species through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction:

- Coastal cactus wren
- Coastal California gnatcatcher
- Least Bell's vireo
- Southwestern willow flycatcher
- Tree-nesting raptors
- Ground-nesting raptors
- Golden eagle
- Light-footed clapper rail

3.2 ANALYSIS OF PROJECT EFFECTS

The proposed Project would result in significant impacts under the above guidelines for the following reasons:

3.1.B The Project would impact habitat for seven County Group 1 animal species observed on site: Cooper's hawk, red-shouldered hawk, northern harrier, white-tailed kite, turkey vulture, prairie falcon, and grasshopper sparrow. These impacts would be significant under County Guideline 3.1.B.

3.1.F The Project site supports raptor foraging habitat. Impacts to 49.7~~53.8~~ acres of non-native grassland and 20.3~~5~~ acres of extensive agriculture (pasture/field) would occur and would be significant under County Guideline 3.1.F.

3.1.L Potential short-term noise impacts could result from construction of the proposed Project. Noise effects would be considered significant if construction noise levels exceed a level of 60 dB L_{EQ} hourly average or ambient adjacent to ground- or tree-nesting raptor nests during the raptor breeding season (February 1 to July 15).

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

3.1.A The Project would not impact any species listed as federally or state endangered or threatened.

3.1.C The Project would impact habitat of three County Group 2 animal species (southern mule deer, yellow warbler, and western bluebird). These impacts would not affect the local long-term survival of these species. While mule deer can occur throughout the property, there is no regional or significant movement corridor through the Project site, which is bordered to the north, south, and east by a combination of residential development and orchards. ~~A road crossing~~Project development would affect a small amount of potential yellow warbler habitat (southern willow scrub~~ riparian forest~~), while the southern riparian forest ~~remaining~~ habitat where this species was observed ~~for this species~~ would be entirely avoided and placed in biological open space~~unaffected~~. Yellow warbler is a fairly common breeding summer resident in the county, as well as a common migrant. Western bluebird is a common resident of foothills and mountains in the county. Habitat for western bluebird occurs scattered throughout the site, some of which would be preserved in biological open space. As such, Project implementation would not affect the local long-term survival of these species.

3.1.D The site contains no habitat suitable for the arroyo toad.

3.1.E The nearest golden eagle nest is approximately 3 miles to the south of the Project site. However, there have been no recent sightings of territorial eagles at this nest location. The Project site does not contain nesting habitat and it is not within any known golden eagle territory. While there is adequate eagle foraging habitat (open non-native

grassland) on site, the surrounding habitat fragmentation and the distance from known eagle territories would indicate that the site has low value for golden eagle. The surrounding area is primarily urbanized so new nesting in the vicinity is unlikely. The USFWS also was contacted and confirmed that they had no information of additional eagle activity near the site. Therefore, impacts to golden eagle habitat would be less than significant.

3.1.G The Project site is not part of a core wildlife area of 500 acres of wildlife habitat or more.

3.1.H. Potentially significant indirect impacts to sensitive species resulting from human access, domestic animals, exotic plant species, and lighting would be avoided through the following design measures: (1) permanent fencing shall be installed around biological open space~~,~~ and signs precluding access shall be posted (Figures 16a-16b); (2) off-leash pets would not be allowed on trails or public areas and signs would be posted along trails notifying pet owners of this regulation; (3~~2~~) only non-invasive plant species would be included in the landscape plan for the site (species not listed on the California Invasive Plant Inventory prepared by the California Invasive Plant Council [Cal-IPC; 2006]); and (4~~3~~) all Project-related lighting would be required to adhere to Division 9 of the San Diego County Light Pollution Code. Lighting within the proposed Project footprint adjacent to undeveloped habitat would be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from these areas. Under County Guideline 3.1.H, impacts to sensitive species resulting from indirect impacts from human access, domestic animals, exotic plant species, or lighting would be less than significant over the long term.

Potential indirect impacts from road kill are not considered significant under County Guideline 3.1.H. No federal or state listed species have been documented on site and none are expected to occur. Roads within the project site would have posted speed limits of 25 mph. This low speed limit would lessen the likelihood of wildlife being hit by vehicles. Most sensitive species that have been documented on site are birds, which are less likely to be hit by vehicles than mammals or reptiles, particularly at low traveling speeds. Furthermore, the southernmost entrance road into Neighborhood 5 would include a con-span bridge measuring 20 feet wide by 6 feet high with an earthen bottom. This Project Design Feature would allow for local movement of aquatic and terrestrial species between the on-site and off-site open space and is of sufficient size for deer to pass through, thereby reducing the potential for road mortality to wildlife. Although road kill of common, non-sensitive species (e.g. side-blotched lizard [*Uta stansburiana*], western fence lizard [*Sceloporus occidentalis*], Audubon's cottontail [*Sylvilagus audubonii*], and California ground squirrel [*Spermophilus beecheyi*]) may increase as a result of the project, these impacts would not be considered significant as these species are widespread throughout the region and do not have special status under federal, state, or local jurisdictions.

Potential indirect impacts from construction noise are discussed under Guideline 3.1.L and in Section 3.4.

3.1.I The Project site does not support occupied burrowing owl habitat.

3.1.J The Project site does not contain suitable habitat for the coastal cactus wren.

3.1.K The Project site does not contain Hermes copper butterfly habitat.

3.3 CUMULATIVE IMPACT ANALYSIS

The area of consideration for cumulative biological projects impacts was based on an approximate 2-mile radius of the Project site (Figure 15), including the foothills west and southwest of the Project site and extending south to the northern edge of Olivenhain Reservoir. The cumulative study area also extends slightly beyond Interstate 15 to the east and north of SR 78. The cumulative study area was chosen because it includes areas with similar biological resources as the Project site, as well as capturing the watershed for the Project site, including urbanized areas draining to Escondido Creek upstream and downstream of the site. It also includes the nearest draft NCMSCP PAMA areas and wildlife corridor in the Mt. Whitney/Double Peak area connecting south to Escondido Creek. The area of consideration includes areas within a reasonable distance from the Project site that may have a biologically based connection to the Project site in terms of habitat, connectivity, and development in the watershed.

A total of 21~~0~~ projects (including the proposed Project) were reviewed for this cumulative analysis (Figure 15; Table 8). Of these 21~~0~~ cumulative projects, 8~~7~~ would result in significant or potentially significant cumulative impacts to sensitive biological resources. The remaining 13 projects either would not result in impacts to sensitive biological resources or information on impacts is not available.

The cumulative projects (including the proposed Project) with available data would impact ~~218.8~~259.5 acres of raptor foraging habitat, as well as potential habitat for grasshopper sparrow. Cumulative impacts to raptors and grasshopper sparrow would be significant since the cumulative projects would further reduce the amount of foraging habitat available for these species. The proposed Project would result in impacts to raptor foraging habitat and grasshopper sparrow habitat comprised of 49.9~~53.8~~ acres of non-native grassland and 20.3~~5~~ acres of extensive agriculture (pasture/field). Therefore, the proposed Project would contribute to significant cumulative impacts to raptors and grasshopper sparrow.

Project Boundary

Cumulative Study Area

County of San Diego

1. Montiel Heights/Montiel Road Townhouses
2. Harmony Grove Village
20. Harmony Grove Village South

City of San Marcos

3. Marketplace @ Twin Oaks
4. Citywide Channel Maintenance Programmatic Permit
5. Candera
6. University District Specific Plan
7. Kaiser Medical Office Building
8. Leigh Hanson Site
9. Campus Pointe II
10. Rancho Coronado Phase I School Site

City of Escondido

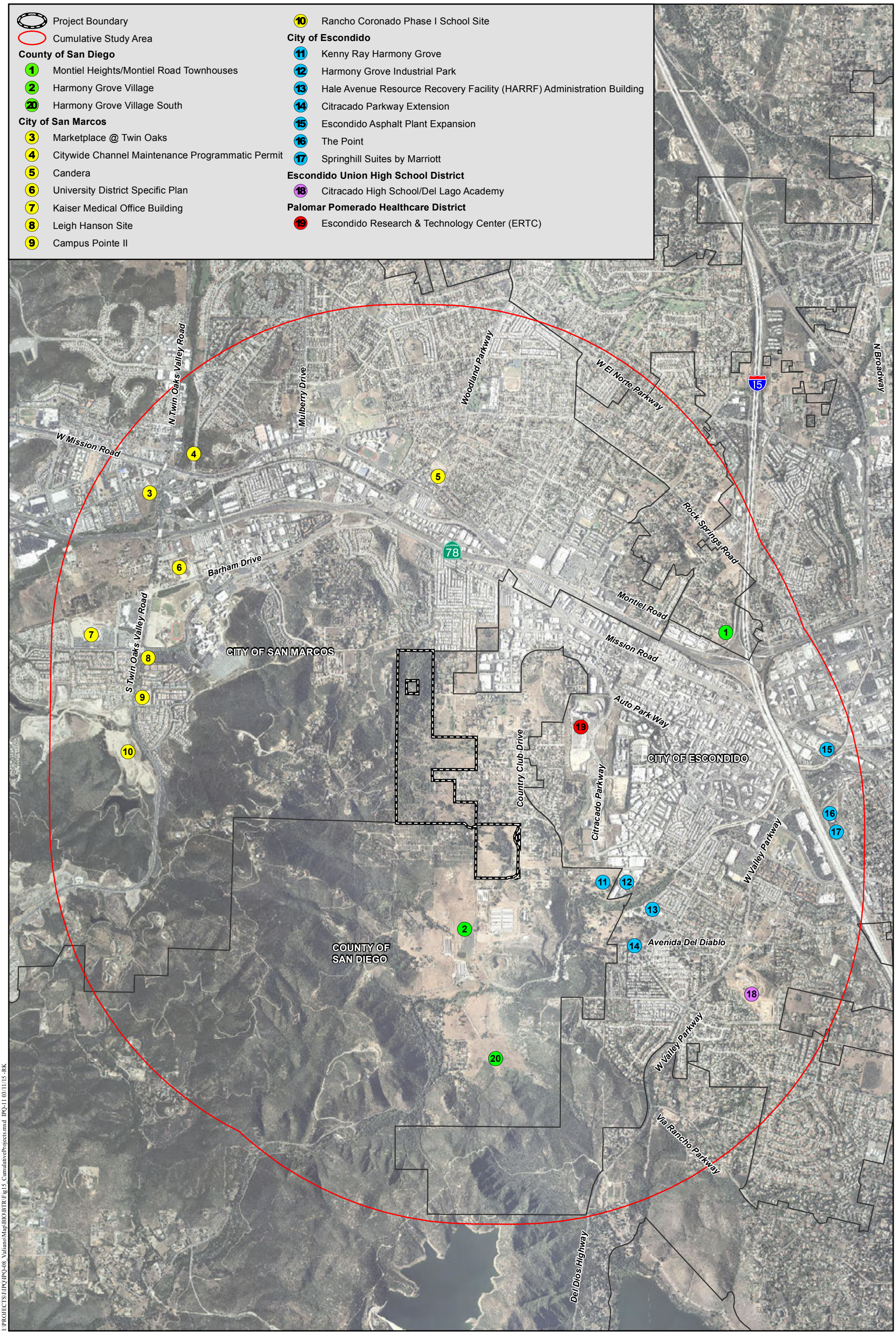
11. Kenny Ray Harmony Grove
12. Harmony Grove Industrial Park
13. Hale Avenue Resource Recovery Facility (HARRF) Administration Building
14. Citracado Parkway Extension
15. Escondido Asphalt Plant Expansion
16. The Point
17. Springhill Suites by Marriott

Escondido Union High School District

18. Citracado High School/Del Lago Academy

Palomar Pomerado Healthcare District

19. Escondido Research & Technology Center (ERTC)



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Biological Cumulative Study Area

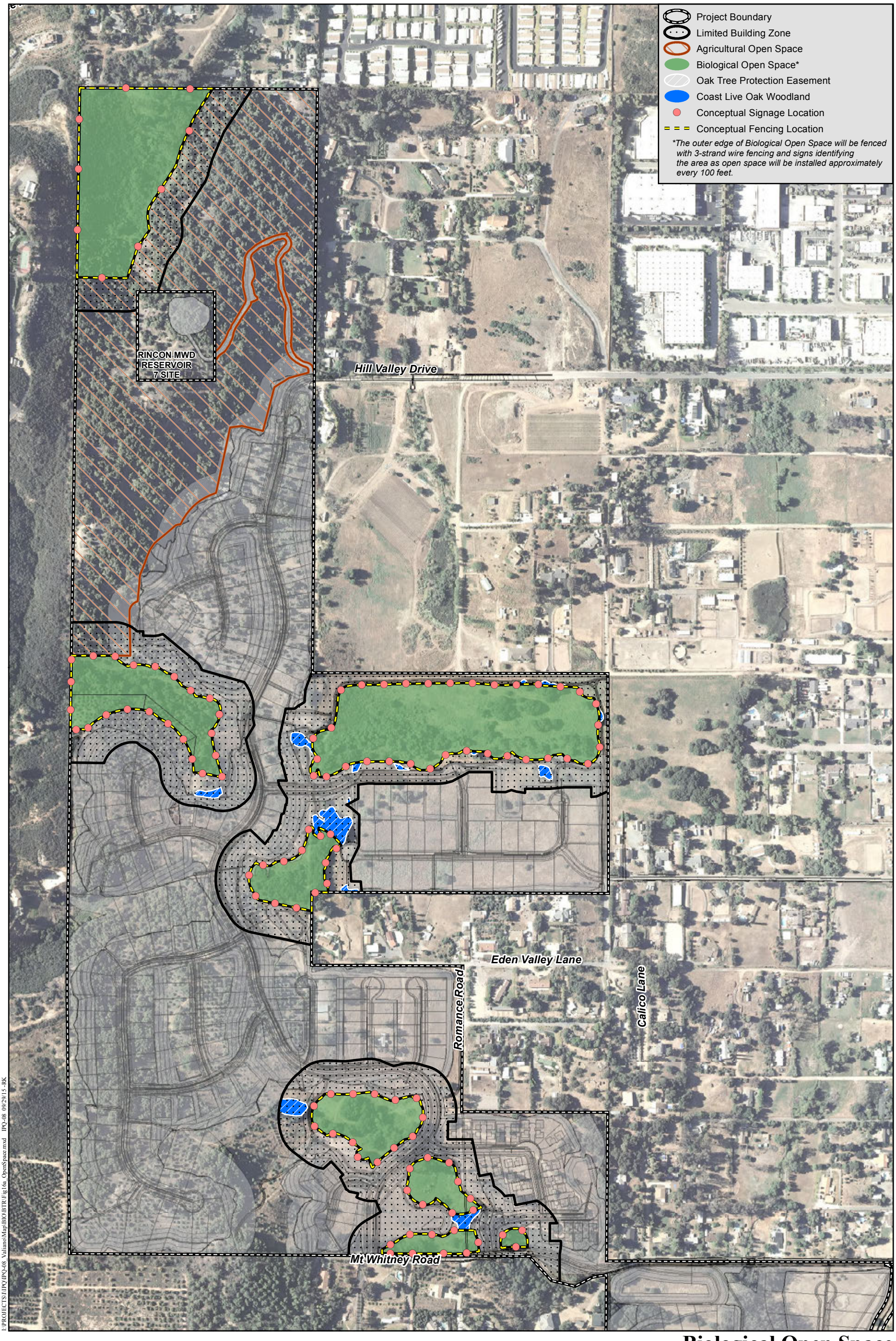
VALIANO

HELIX Environmental Planning

N

0 2,700 Feet

Figure 15



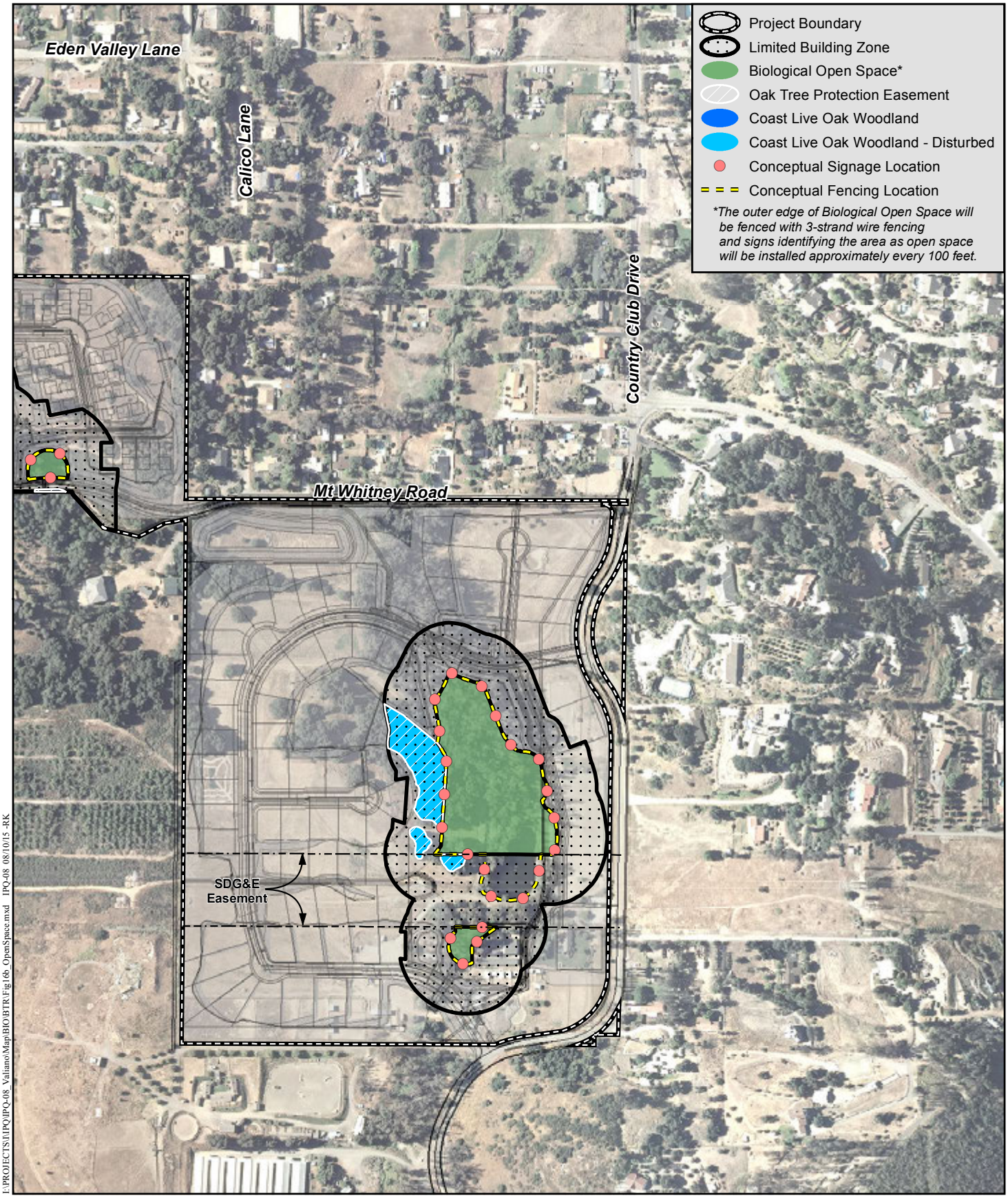
Biological Open Space

VALIANO

HELIX Environmental Planning

N 0 400 Feet

Figure 16a



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Biological Open Space

VALIANO

HELIX Environmental Planning

N 0 400 Feet

Figure 16b

The proposed Project would mitigate for these impacts through the purchase of credits and/or off-site preservation of 49.1~~53.1~~ acres of non-native grassland/raptor foraging habitat for impacts to non-native grassland, and an additional 10.2~~3~~ acres of off-site preservation and/or purchase of credits for impacts to extensive agriculture considered raptor foraging habitat. Thus the proposed Project's impacts to raptor foraging habitat and habitat for grasshopper sparrow would be mitigated through preservation/acquisition of appropriate habitat off site. Although a significant impact to sensitive wildlife habitat would occur and the proposed Project would contribute to these significant impacts, such impacts would be mitigated and the proposed Project's contribution to cumulative impacts to sensitive wildlife would be less than significant.

No cumulative impacts to listed plant or animal species would occur as no listed species are present on site.

Table 8
CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES

MAP REFERENCE NO.	PROJECT NUMBER†	PROJECT NAME	RESOURCE*									
			Riparian/Wetland		CLOW		CSS		SMC		NNG	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M	I	M
1	GPA 04-007 REZ 04-014 TM 5382	Montiel Heights/ Montiel Road Townhomes	0	0	0	0	0	0	0	0	0	0
2	SP 04-003 GPA 04-004 REZ 04-010 VTM 5365 MUP 04-012 MUP 04-013 MUP 04-014	Harmony Grove Village	3.96	6.80	5.8	17.4	37.6	68.6	3.7	1.9	37.7	18.9
3	--	Marketplace @ Twin Oaks	--	--	--	--	--	--	--	--	--	--
4	ND 12-822	Citywide Channel Maintenance Programmatic Permit	0.71	1.28	0	0	0	0	0	0	0	0
5	MF 1785 TSM 479 MFSCDP 10-51 R 10-146 GV 10-85 CUP 10-835 ND 10-806	Candera	--	--	--	--	--	--	--	--	--	--
6	MF 1392 EIR 03-39	University District Specific Plan	--	--	--	--	--	--	--	--	--	--
7	SCH 92011057	Kaiser Medical Office Building	--	--	--	--	--	--	--	--	--	--
8	--	Leigh Hanson Site	--	--	--	--	--	--	--	--	--	--

Table 8 (cont.)
CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES

MAP REFERENCE NO.	PROJECT NUMBER†	PROJECT NAME	RESOURCE*									
			Riparian/Wetland		CLOW		CSS		SMC		NNG	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M	I	M
9	--	Campus Pointe II	--	--	--	--	--	--	--	--	--	--
10	MND 12-820 CUP 12-894	Rancho Coronado Phase I School Site	0.35	0.70	0	0	0.25	--	0.47	--	0	0
11	SUB 09-0002	Kenny Ray Harmony Grove	--	--	--	--	--	--	--	--	--	--
12	ER 2000-34	Harmony Grove Industrial Park	--	--	--	--	--	--	--	--	--	--
13	PHG 11-0038	Hale Avenue Resource Recovery Facility (HARRF) Administration Building	0	0	0	0	0	0	0	0	0	0
14	ER-2006-10	Citracado Parkway Extension	0.71	2.13	0.94	1.7	0.6	0.6	0	0	6.4	4.2
15	File No. 0800-40 PHG 10-0014	Escondido Asphalt Plant Expansion	0	0	0	0	0	0	0	0	0	0
16	2007-25-PD 2005-20-PD	The Point	0	0	0	0	0	0	0	0	0	0
17	2007-18-PD ER 86-43	Springhill Suites by Marriott	0	0	0	0	0	0	0	0	0	0
18	ADM 10-0001 SCH No. 2009081074	Citracado High School/ Del Lago Academy	0	0	0	0	8.1	8.1	0	0	18.1	--
19	2001-01-SPA 2005-81-SPA/DA PHG 11-0034 SCH No. 200112106	Escondido Research & Technology Center (ERTC)	1.02	3.06	1.2	3.6	48.4	96.8	0	0	102.8	62.4

Table 8 (cont.)
CUMULATIVE IMPACTS TO BIOLOGICAL RESOURCES

MAP REFERENCE NO.	PROJECT NUMBER†	PROJECT NAME	RESOURCE*									
			Riparian/Wetland		CLOW		CSS		SMC		NNG	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M	I	M
20	SP-15-002	Harmony Grove South	0.7	2.1	0.1	0.2	10.0	20.0	14.4	21.7	44.6	22.3
Subtotal	--	--	~~6.75~~7.45	**~~13.97~~16.07**	**~~7.94~~ 8.04**	**~~22.7~~ 22.9**	**~~94.95~~ 104.95**	**~~174.1~~ 194.1**	**~~4.17~~ 18.57**	**~~1.9~~ 23.6**	**~~165.0~~ 209.6**	**~~85.5~~ 107.8**
Proposed Project	SP-13-001 GPA 13-001 STP 13-003 TM 5575 REZ 13-001	Valiano	~~0.32~~0.15	~~0.96~~0.45	~~6.7~~ 6.2	~~20.4~~ 19.5	~~1.0~~ 0.2	3.6	~~3.1~~ 3.0	~~1.6~~ 1.5	~~53.8~~ 49.9	~~53.1~~ 49.1
TOTAL	--	--	~~7.07~~7.60	**~~14.93~~16.52**	**~~14.6~~ 14.2**	**~~43.1~~ 42.4**	**~~96.0~~ 105.2**	**~~177.7~~ 197.7**	**~~7.3~~ 21.57**	**~~3.5~~ 25.1**	**~~218.8~~ 259.5**	**~~138.6~~ 156.9**

*CLOW=coast live oak woodland, CSS=coastal sage scrub, SMC=southern mixed chaparral, NNG=non-native grassland
†TM = Tentative Map; TPM = Tentative Parcel Map; MUP = Major Use Permit; ND = Negative Declaration; EIR = Environmental Impact Report;
MND = Mitigated Negative Declaration; SPA = Specific Plan Amendment; SCH = State Clearinghouse; -- = Information Not Available or Not Applicable.

3.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

The following mitigation measures (MMs) are recommended to reduce the impacts to special status species to less than significant.

Impact 3.4.1 Implementation of the proposed Project would impact raptor foraging habitat (including Cooper's hawk, red-shouldered hawk, northern harrier, white-tailed kite, prairie falcon, and turkey vulture), and habitat for grasshopper sparrow, comprised of ~~53.8~~49.9 acres of non-native grassland and 20.3~~5~~ acres of extensive agriculture (pasture).

MM 3.4.1 Mitigation for impacts to non-native grassland habitat (typically a 0.5:1 ratio) must include impacts to sensitive species (grasshopper sparrow and raptors) which increases the mitigation ratio to 1:1, for a mitigation requirement of ~~53.1~~49.1 acres.[1] Mitigation for impacts to extensive agriculture, which provides more limited habitat value to species, will occur at the base ratio of 0.5:1, for a mitigation requirement of 10.2~~3~~ acres. Mitigation for impacts to raptor foraging habitat and grasshopper sparrow habitat would occur through one or a combination of the following: off-site preservation of grassland habitat and/or other like-functioning habitat within the NC MSCP PAMA boundaries, or purchase of grassland credits or like-functioning habitat at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies. The 0.6 acre of mitigation for non-native grassland and 10.2~~3~~ acres of mitigation for extensive agriculture within the Elfin Forest Harmony Grove Community Plan (EFHGCP) shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.

Impact 3.4.2 Construction-related noise may significantly impact tree- or ground-nesting raptors that may be nesting within 300 feet of the construction area such that construction noise at the nest exceeds 60 dB L_{EQ}.

MM 3.4.2 No grubbing, clearing, or grading within 300 feet of an active raptor nest during the raptor-breeding season (February 1 to July 15) will occur. As such, all grading permits, improvement plans, and the final map will state the same. If grubbing, clearing, or grading is proposed during the raptor breeding season, a pre-grading survey will be conducted within 3 days prior to clearing to determine if raptors occur within the areas directly impacted by grading or indirectly impacted by noise. If there are no raptors nesting (includes nest building or other breeding/nesting behavior) within this area, development will be allowed to proceed upon approval of the Director of PDS with concurrence from USFWS and CDFW. However, if raptors are observed nesting or displaying

[1] ~~53.1~~49.1 acres of grassland mitigation would be provided for impacts to ~~53.8~~49.9 acres of non-native grassland. The remaining 0.8~~7~~ acre would be mitigated through oak woodland mitigation, as impacts to 0.8~~7~~ acre of non-native grassland occur within the oak root zone as defined by the County and are considered impacts to oak woodland.

breeding/nesting behavior within the area, construction will be postponed until (1) all nesting (or breeding/nesting behavior) has ceased or until after July 15; or (2) a temporary noise barrier or berm will be constructed at the edge of the development footprint to reduce noise levels below 60 dB L_{EQ} or ambient (if ambient is greater than 60 dB L_{EQ}), to the satisfaction of the Director of PDS with concurrence from USFWS and CDFW. Alternatively, if approved by the Director of PDS with concurrence from USFWS and CDFW, the duration of construction equipment operation could be controlled to keep noise levels below 60 dB L_{EQ} or ambient in lieu of or in concert with a wall or other sound attenuation barrier.

3.5 CONCLUSION

Implementation of the proposed Project would directly impact habitat for several County Group 1 species, including raptor habitat and habitat supporting grasshopper sparrow, and also may result in indirect impacts from construction noise. If implemented, the recommended MMs would reduce these impacts to less than significant.

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 (County 2010b)?

Any of the following conditions would be considered significant if:

A. Project-related grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5 in the County Guidelines for Determining Significance [County 2010b], 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: vegetation removal; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; road crossing construction; 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 cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term.

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 proposed Project would result in significant impacts under the above guidelines for the following reasons:

4.1.A As discussed above, implementation of the proposed Project would result in direct impacts to approximately ~~64.9~~59.5 acres of riparian and/or sensitive vegetation communities comprised of: ~~0.17 acre of southern riparian forest,~~ 0.04 acre of southern willow scrub, 0.01 acre of mule fat scrub, 0.02 acre of herbaceous wetland, 0.08 acre of disturbed wetland, 6.2~~7~~ acres of coast live oak woodland, 0.2~~1.0~~ acre of Diegan coastal sage scrub, 3.0~~1~~ acres of southern mixed chaparral, and 49.9~~53.8~~ acres of non-native grassland. These impacts would be significant according to County Guideline 4.1.A.

4.1.B The Project site supports jurisdictional wetlands and riparian habitat. Impacts to jurisdictional waterways include ~~0.21 acre of WUS (including~~ 0.19 acre of non-wetland WUS~~)~~, 0.76~~0.92~~ acre of CDFW jurisdictional areas (including 0.26 acre of unvegetated streambed), and 0.01~~0.18~~ acre of County RPO wetland (Table 7). These impacts would be 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 withdrawals or activities that could result in lowering of the groundwater table are proposed. Groundwater would continue to be used for orchards remaining on site after Project development but would be substantially less than over the last two decades, as the amount of orchard would be reduced by over 60 percent. Current water use for irrigation of onsite orchard is approximately 468 acre-feet per year. Irrigation of orchard in the post-development condition is estimated to be 148 acre-feet of water per year, resulting in a reduction of approximately 320 acre-feet (over 104 million gallons) of ground water per year. Furthermore, the Project would use recycled water for landscaping irrigation. Under County Guideline 4.1.C, impacts would be less than significant.

4.1.D The Project would not result in significant indirect impacts from the spread of non-native plant species during construction, as non-native species are already prevalent throughout the Project site, comprising 50 percent of the species observed on site. To avoid further impacts from plants installed as part of the Project, only non-invasive plant species would be included in the landscape plan for the site (species not listed on the California Invasive

Plant Inventory prepared by the California Invasive Plant Council [Cal-IPC; 2006]). Under County Guideline 4.1.D, impacts would be less than significant occur.

4.1.E The Project provides minimum 50-foot wetland buffers around all preserved wetlands on site. This buffer width is considered appropriate given the small amount of wetlands occurring on site, their scattered distribution, lack of connectivity to large areas of off-site open space, and negative survey findings for listed species. Under County Guideline 4.1.E, impacts would be less than significant.

4.3 CUMULATIVE IMPACT ANALYSIS

The cumulative projects (including the proposed Project) with available data would result in impacts to 6.907~~.07~~ acres of wetland/riparian habitats, 14.1~~9~~ acres of coast live oak woodland, 95.2~~96.0~~ acres of coastal sage scrub, 7.2~~3~~ acres of southern mixed chaparral, and 214.9~~218.8~~ acres of non-native grassland. Cumulative impacts to sensitive habitats would be significant.

The proposed Project's impacts to wetland/riparian habitat and sensitive upland communities, while significant at the project level, are considered cumulatively significant but mitigable as the Project would provide mitigation for these impacts in accordance with County and regulatory agency guidelines. The County approved mitigation ratios are standardized and not dependent upon the quality of habitat. Rather, the mitigation ratios recognize the regional importance of the habitat, the overall rarity of the habitat, and the number and variety of species it supports. Mitigation for habitat loss is required to compensate for direct impacts as well as cumulative loss of habitat. Impacts to wetland/riparian habitat and sensitive upland communities would be fully mitigated at County-approved ratios through off-site preservation and/or purchase of credits at an approved mitigation bank, thus providing long-term conservation value. As the Project would be in conformance with County guidelines and mitigation ratios, the proposed Project's contribution to cumulative impacts to sensitive vegetation communities is not considerable.

4.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Impact 4.4.1 Implementation of the proposed Project would result in direct impacts to 59.5~~64.9~~ acres of ten sensitive vegetation communities comprised of: ~~0.17 acre of southern riparian forest,~~ 0.04 acre of southern willow scrub, 0.01 acre of mule fat scrub, 0.02 acre of herbaceous wetland, 0.08 acre of disturbed wetland, 6.2~~7~~ acres of coast live oak woodland, 0.2~~1.0~~ acre of isolated Diegan coastal sage scrub, 3.0~~1~~ acres of granitic southern mixed chaparral and 49.9~~53.8~~ acres of non-native grassland. The Project also would indirectly impact 1.6~~0.8~~ acre of Diegan coastal sage scrub.

~~*MM 4.4.1a* The Project's effect on 0.17 acre of southern riparian forest will be mitigated at a 3:1 ratio through the purchase of 0.51 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.~~

MM 4.4.1a~~b~~ The Project's effect on 0.04 acre of southern willow scrub will be mitigated at a 3:1 ratio by the purchase of 0.12 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.

MM 4.4.1b~~c~~ The Project's effect on 0.01 acre of mule fat scrub will be mitigated at a 3:1 ratio by the purchase of 0.03 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.

MM 4.4.1c~~d~~ The Project's effect on 0.02 acre of herbaceous wetland will be mitigated at a 3:1 ratio by the purchase of 0.06 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.

MM 4.4.1d~~e~~ The Project's effect on 0.08 acre of disturbed wetland will be mitigated at a 3:1 ratio by the purchase of 0.24 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.

MM 4.4.1e~~f~~ The Project's effect on 6.2~~7~~ acres of coast live oak woodland and 1.0~~0.9~~ acre of oak woodland buffer (consisting of 0.8~~7~~ acre non-native grassland, ~~and~~ 0.2~~0~~.1 acre of eucalyptus woodland, and 0.1 acre combined impacts to extensive agriculture, southern mixed chaparral, and eucalyptus forest [Figure 11d])[2] will be mitigated at a 2:1 ratio for the 2.1~~4~~ acres occurring within the Limited Building Zone around biological open space, and at a 3:1 ratio for the remaining 4.1~~3~~ acres of impact and 1.0~~0.9~~ acre of buffer impact. A 2.1~~4~~-acre Oak Tree Protection Easement would be recorded over the 2.1~~4~~ acres of coast live oak woodland remaining within the LBZ, which would limit fuel modification to clearing of the understory and prohibit the removal of mature oak trees. Mitigation would be accomplished through one or a combination of the following: the purchase of 19.5~~20.4~~ acres of oak woodland, oak riparian woodland, or oak riparian forest credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies, and/or off-site acquisition and preservation of land within the NC MSCP PAMA boundaries containing oak woodland, oak riparian woodland, or oak riparian forest. The ~~9.8~~11.2 acres of mitigation for oak woodland within the EFHGCP shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.

MM 4.4.1f~~g~~ The Project's direct effect on 0.2~~1.0~~ acre of Diegan coastal sage scrub and indirect effect on 1.6~~0.8~~ acres of Diegan coastal sage scrub will be mitigated at a 2:1 ratio through the purchase of 3.6 acres of coastal sage scrub credits at an

[2] A total of 0.6 acre of coast live oak woodland habitat occurring within the oak woodland buffer also would be impacted. These impacts are already included in the acreage totals for direct impacts to oak woodland and mitigation provided at a 3:1 ratio.

approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies; and/or off-site acquisition and preservation of land within the NC MSCP PAMA boundaries containing Diegan coastal sage scrub. The 0.2 acre of mitigation for coastal sage scrub within the EFHGCP shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.

MM 4.4.1g~~h~~ The Project's effect on 3.1 acres of granitic southern mixed chaparral will be mitigated at a 0.5:1 ratio through one or a combination of the following: the purchase of 1.5~~6~~ acres of chaparral credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies; or off-site acquisition and preservation of land within the NC MSCP PAMA boundaries containing southern mixed chaparral.

MM 4.4.1h~~i~~ The Project's effects on 49.9~~53.8~~ acres of non-native grassland will be mitigated at a 1:1 ratio through one or a combination of the following: off-site preservation of 49.1~~53.1~~ acres[3] of grassland habitat and/or other like-functioning habitat within the NC MSCP PAMA boundaries, or purchase of ~~53.1~~49.1 acres of grassland credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies. Impacts to 20.3~~5~~ acres of extensive agriculture will be mitigated at the base ratio of 0.5:1, for a mitigation requirement of 10.2~~3~~ acres through one or a combination of the following: off-site preservation of 10.2~~3~~ acres of pasture or grassland habitat and/or other like-functioning habitat within the NCMSCP PAMA boundaries, or purchase of 10.2~~3~~ acres of grassland credits or other habitat suitable for raptor foraging at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies. The 0.6 acre of mitigation for non-native grassland and 10.2~~3~~ acres of mitigation for extensive agriculture within the EFHGCP shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.

Impact 4.4.2 Implementation of the proposed Project would impact ~~0.02 acre of herbaceous wetland WUS and~~ 0.19 acre of non-wetland WUS regulated by the USACE.

MM 4.4.2 ~~Impacts to 0.02 acre of USACE herbaceous wetland will be mitigated at a 3:1 ratio as described in MM 4.4.1d.~~ Impacts to 0.19 acre of non-wetland WUS would be mitigated by the purchase of 0.19 credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies. All mitigation for WUS would occur in consultation with the USACE.

[3] ~~53.1~~49.1 acres of grassland mitigation would be provided for impacts to 49.9~~53.8~~ acres of non-native grassland. The remaining 0.8~~7~~ acre would be mitigated through oak woodland mitigation, as impacts to 0.8~~7~~ acre of non-native grassland occur within the oak root zone as defined by the County and are considered impacts to oak woodland.

Impact 4.4.3 Implementation of the proposed Project would impact a total of 0.50~~66~~ acre of vegetated CDFW jurisdictional areas, comprised of ~~0.14 acre of southern riparian forest,~~ 0.38~~9~~ acre of coast live oak woodland, 0.02 acre of southern willow scrub, ~~0.01 acre of mule fat scrub,~~ 0.02 acre of herbaceous wetland, and 0.08 acre of disturbed wetland. Impacts to unvegetated CDFW habitat (streambed) are discussed below under Impact 4.4.4.

MM 4.4.3 Impacts to 0.50~~66~~ acre of vegetated CDFW jurisdictional areas will be mitigated by the implementation of MMs ~~4.4.1a (southern riparian forest),~~ 4.4.1a~~b~~ (southern willow scrub), 4.4.1b~~c~~ (mule fat scrub), 4.4.1e~~f~~ (coast live oak woodland), 4.4.1c~~d~~ (herbaceous wetland) and 4.4.1d~~e~~ (disturbed wetland). Mitigation for impacts to CDFW streambed is described in MM 4.4.4.

Impact 4.4.4 Implementation of the proposed Project would impact 0.26 acre of CDFW streambed.

MM 4.4.4 Impacts to 0.26 acre of CDFW streambed will be mitigated by the implementation of MM 4.4.2, plus purchase of an additional 0.07 acre of credit at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.

Impact 4.4.5 Implementation of the proposed Project would impact ~~0.18~~0.01 acre of County RPO wetlands comprised of ~~0.17 acre of southern riparian forest and 0.01 acre of~~ a single stand of mule fat scrub.

MM 4.4.5 Impacts to 0.01~~0.18~~ acre of County RPO wetlands will be mitigated by the implementation of MM 4.4.1b~~a and 4.4.1c~~.

4.5 CONCLUSION

Implementation of the proposed Project would result in significant impacts to sensitive natural communities, including jurisdictional areas; however, a combination of avoidance through project design and mitigation measures for loss of habitat resulting from implementation of the potential Project would reduce impacts to less than significant. Mitigation is proposed 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

5.1.A *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means (County 2010b)?*

5.2 ANALYSIS OF PROJECT EFFECTS

No federal wetlands as defined by Section 404 of the CWA would be impacted; therefore, under County Guideline 5.1.A no significant impact would occur.~~As previously stated in Sections 2.4 and 4.2, implementation of the proposed Project would result in impacts to 0.02 acre of herbaceous wetland WUS and 0.19 acre of non-wetland WUS (Table 7 and Figures 12a and 12b). Impacts to herbaceous wetland WUS are significant under County Guideline 5.1.A.~~

5.3 CUMULATIVE IMPACT ANALYSIS

No federal wetlands as defined by Section 404 of the CWA would be impacted; therefore, under County Guideline 5.1.A no significant cumulative impact would occur. ~~The proposed Project's impacts to 0.21 acre of USACE jurisdictional areas comprised of 0.02 acre of herbaceous wetland and 0.19 acre of non-wetland waters, while significant at the project level would be fully mitigated by off-site establishment and rehabilitation of wetlands/WUS. Mitigation would conform to the USACE's no net loss policy, thus no cumulatively significant impact would occur.~~

5.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

No federal wetlands as defined by Section 404 of the CWA would be impacted; therefore, no mitigation is required under County Guideline 5.1.A. Mitigation for impacts to USACE non-wetland waters is addressed through MM 4.4.2.
~~Impacts to USACE jurisdictional areas will be mitigated by off-site restoration and/or purchase of credits at a mitigation bank.~~

~~*Impact 5.4.1* Implementation of the proposed Project would impact 0.02 acre of herbaceous wetland WUS.~~

~~*MM 5.4.1* Impacts to 0.02 acre of herbaceous wetland WUS will be mitigated through implementation of MM 4.4.1d.~~

5.5 CONCLUSION

Implementation of the proposed Project would not result in ~~significant~~ impacts to federally protected~~USACE~~ wetlands; however, the Project would ~~also~~ impact non-wetland WUS and CDFW streambed. MMs, as determined in consultation with the USACE and CDFW, are anticipated.

Impacts to jurisdictional areas would require permitting through the appropriate regulatory agencies, as discussed below. Final mitigation requirements would be determined through agency consultation~~, and would reduce impacts to less than significant~~.

5.5.1 U.S. Army Corps of Engineers

The regulatory authority of the USACE comes from Section 404 of the CWA, which requires USACE authorization for work involving intentional or unintentional placement of fill or discharge of dredged materials into any WUS. A federal CWA Section 404 Permit would be required for the proposed Project to place fill in WUS. Impacts to less than 0.5 acre of non-vernal pool WUS are typically processed through a Nationwide Permit.

5.5.2 Regional Water Quality Control Board

A federal CWA Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB) is required for every federal permit action that may result in a discharge into any WUS. This certification must be issued prior to any 404 Permit. The RWQCB reviews the request for certification and may recommend either certification or denial thereof to the State Board Executive Director.

5.5.3 California Department of Fish and Wildlife

The CDFW requires a 1602 SAA for projects that would divert or obstruct the natural flow of water; change the bed, channel, or bank of any stream; remove riparian vegetation; or use any material from a streambed. The SAA is a contract between the applicant and the CDFW stating what can be done in the riparian zone and stream course.

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 (County 2010b)?

Any of the following conditions would be considered significant if:

A. The Project would impede 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 proposed Project would not result in significant impacts under the above guidelines for the following reasons:

6.1.A The Project would impede wildlife access to on-site areas that may be used for foraging, breeding, or obtaining water, however, these areas do not support critical populations of species and the Project would not impede access to areas necessary for their reproduction. As discussed in Section 1.4.8, the Project site is situated at the western edge of existing development with little opportunity for wildlife movement to the east and north. The construction of the Harmony Grove Village development further limits wildlife connectivity to the south of the site. The only open space areas adjacent to the site are two small areas within Harmony Grove Village: (1) a 1.4-acre area of isolated open space along a small portion of the Project site's southern boundary, and (2) a 1.9-acre area of isolated open space south of Mt. Whitney Road and abutting the Project site's southwestern edge. As such, wildlife movement within and adjacent to the site is primarily associated with connectivity to off-site habitat along the western site boundary from Mt. Whitney Road north, which abuts existing rural residential development interspersed with chaparral–covered hillsides. This off-site habitat is not within a PAMA but does provide habitat for wildlife and connectivity to conserved lands located further to the west, including several canyons that are likely to support areas for wildlife to obtain water, as well as areas suitable for foraging and breeding for deer and other wildlife. The Project would preserve approximately 47.5~~48.6~~ acres in the northwest corner of the site as a combination of 12.1 acres of biological open space and 35.4~~36.5~~ acres within an agricultural easement, connecting to off-site chaparral along an approximately 2,900-linear foot distance of the western boundary from the site's northwest corner to the edge of the fuel modification zone in Neighborhood 4 (Figure 16a). Biological open space in the northwest corner and other portions of the site would conserve a total of 31.2~~28.2~~ acres of habitat, consisting primarily of wetland, riparian, oak woodland, and grassland habitats. Preservation of these habitats will continue to provide foraging and breeding habitat for a variety of species. The Project would not alter existing access from the west to two riparian areas on site, one in preserved lands in the northernmost parcel within southern mixed chaparral and avocado

groves, and the other within biological open space in Neighborhood 4. As discussed above, these areas are part of a 47.5~~48.6~~-acre block of land that consists of biological open space and an agricultural easement, which connect to off-site native habitat along approximately 2,900 linear feet of the western site boundary. The riparian area and adjacent preserved lands within Neighborhood 4 provide areas suitable for foraging and breeding, as well as providing a water source for wildlife. Project implementation would impede access to biological open space within Neighborhood 3 to the east from open space in Neighborhood 4, mainly for mammal species; however, these areas would continue to provide foraging and breeding habitat for avian species and do not provide areas critical for mammal reproduction. Conserved lands associated with Mt. Whitney/Double Peak are located approximately one mile to the west and portions of the Escondido Creek Resource Conservation Area are further to the southwest. The viability of these off-site conserved lands as habitat and movement corridors for wildlife would not be affected by the Project as they are part of larger, connected open space areas that do not extend across the Project site. Furthermore, the southernmost entrance road into Neighborhood 5 includes a con-span bridge measuring 20 feet wide by 6 feet high with an earthen bottom. This project design feature would allow for local movement of aquatic and terrestrial species between the on-site and off-site open space and is of sufficient size for deer to pass through, thereby reducing the potential for road mortality to wildlife. Project implementation would retain adequate access to areas that may be used for foraging, breeding, and water sources. As such, the Project would have less than significant impacts under County Guideline 6.1.A.

6.1.B The Project site does not provide core wildlife habitat or linkage areas. As discussed above, the Project site is situated at the western edge of existing development with limited opportunity for wildlife movement to the east and north of the Project site. The construction of the Harmony Grove Village development further limits wildlife connectivity to the south of the Project site. Thus, the only area of substantial connectivity allowing local wildlife movement to off-site habitat is to the west of the site. The Project would conserve ~~48.6~~47.5 acres of land in the northern portion of the site along approximately 2,900 linear feet of the site's western boundary as a combination of biological open space and agricultural easement, thus continuing to allow for wildlife to access the Project site from the west. However, there is no existing regional corridor that continues across the site from the west to off-site preserved habitat because of existing urban and residential development to the north, east, and south of the Project site. The site does not provide connectivity between large blocks of habitat or interfere with a regional wildlife corridor or linkage, which is supported by the fact that the site is not identified as potential future PAMA in the draft NCMSCP. Conserved lands associated with Mt. Whitney/Double Peak are located approximately one mile to the west and portions of the Escondido Creek Resource Conservation Area are further to the southwest. The viability of these off-site conserved lands as habitat and movement corridors for wildlife would not be affected by the Project as they are part of larger, connected open space areas that do not extend across the Project site. The Project site is used by a variety of wildlife species but does not support core or critical populations of any special status species, nor have any listed species or narrow endemic plant or animal species been observed on site. The Project site contains non-continuous riparian areas

interspersed primarily with orchard and non-native grassland and does not provide core wildlife habitat or linkage areas. As such, the Project would have less than significant impacts under County Guideline 6.1.B.

6.1.C The Project would not create artificial wildlife corridors. Riparian habitats, which are often associated with local wildlife movement, would be largely conserved in on-site Biological Open Space. However, these areas do not occur as continuous riparian corridors on site, but rather as clusters of riparian habitat interspersed with grassland, orchard, and other upland vegetation communities. Although site development would occur within these connecting upland areas and impede local wildlife movement, no artificial corridors that do not follow natural movement patterns would be created. Under County Guideline 6.1.C, no significant impact would occur.

6.1.D As previously discussed in Section 3.2, 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 Project site adjacent to undeveloped habitat would be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from such habitat. Additionally, the site is not part of a regional corridor or linkage, and as such, noise impacts resulting from the Project would not impact any regional corridors and linkages. Under County Guideline 6.1.D, no significant impact to wildlife corridors or linkages resulting from lighting or noise 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 discussed in Section 1.4.8, the Project site is not part of a regional wildlife corridor or linkage. 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, as none exist on or adjacent to the site. Under County Guideline 6.1.F, no significant impact would occur.

6.3 CUMULATIVE IMPACT ANALYSIS

The cumulative projects are located in existing urbanized areas of San Marcos, Escondido, and unincorporated County, or located on the fringes of urbanization (Figure 15). Primary wildlife use areas are located in the Mt. Whitney area and along Escondido Creek. Cumulative effects have occurred between these two use areas. In light of the project's analysis and distance from Escondido Creek, the project's contribution is not considerable. Supporting this conclusion is the fact that the project area is not located within draft PAMA under the draft NCMSCP.

6.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

No significant impacts would occur and no mitigation is required.

6.5 CONCLUSION

No significant impacts would occur and no mitigation is required.

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 HCP, NCCP plan, or other approved local, regional or state HCP (County 2010b)?

Any of the following conditions would be considered significant if:

A. For lands outside of the MSCP, the project would impact Diegan 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. For example, the Project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.

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 HCP, Resource Management Plan (RMP), Special Area Management Plan, Watershed Plan, or similar regional planning effort.

F. For lands within the MSCP, the project would not minimize impacts to BRCA, as defined in the BMO (County 2010c).

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; BGEPA).

7.2 ANALYSIS OF PROJECT EFFECTS

The proposed project would result in significant impacts under the above guidelines for the following reason:

7.1.K Implementation of the proposed Project could potentially result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA), as breeding birds may temporarily or permanently leave their territories to avoid construction activities, which could lead to reduced reproductive success and increased mortality. This would be significant according to County Guideline 7.1.K.

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

7.1 A The Project site is outside of the MSCP and the Project would directly impact 0.2~~1.0~~ of 1.8 acre (11~~56~~ percent) of the Diegan coastal sage scrub on site. The remaining 1.6~~0.8~~ acre is not considered biologically viable due to the small amount of habitat remaining and would therefore be mitigated as well. The loss of 1.8 acres of sage scrub would not be in excess of the County's 5 percent habitat loss threshold, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

7.1.B Implementation of the proposed Project would not preclude or prevent the preparation of the subregional NCCP as the Project site occurs within a subregion with an approved NCCP Plan (MSCP) and is not identified as an area critical to future habitat preserves. Under County Guideline 7.1.B, no significant impact would occur.

7.1.C The Project would impact 0.01~~0.18~~ acre of wetlands as outlined in the RPO, although no sensitive habitat lands as defined by the County's RPO occur on site. Impacts to RPO wetlands would occur in one~~two~~ location~~s~~: ~~(1)~~ widening of Mt Whitney Road would impact 0.01 acre of mule fat scrub in Neighborhood 1~~, and (2) construction of a road crossing would impact 0.17 acre of southern riparian forest in Neighborhood 3~~. RPO wetland crossing findings are presented in Section 2.4 and the project is consistent with the RPO under County Guideline 7.1.C.

7.1.D The Project has minimized impacts to coastal sage scrub to the greatest extent practicable. Very little coastal sage scrub occurs on site (1.8 acres), of which 1.6~~0.8~~ acre would not be directly affected by development or fuel modification. However, the Project would mitigate at a 2:1 ratio for the entire 1.8 acres of coastal sage scrub occurring on site (see MM 4.4.1f~~g~~), thus no significant impact would occur under County Guideline 7.1.D.

7.1.E The Project site is within the Draft North County Subarea Plan boundary, but is not within the adopted South County Subarea Plan. Under County Guideline 7.1.E, no significant impact would occur.

7.1.F The Project site is not within County's adopted MSCP. Under County Guideline 7.1.F, no significant impact would occur.

7.1.G The Project would not preclude connectivity between areas of high habitat values, as lands on and adjacent to the Project site are identified as Developed and Agriculture on the County's Habitat Evaluation Map (2002). As such, no significant impact would occur under County Guideline 7.1.G.

7.1.H As discussed in Section 1.4.8, the Project site is not part of a regional wildlife corridor or linkage. The Project site is situated at the western edge of existing development with little opportunity for wildlife movement to the east and north due to urban sprawl within the Cities of San Marcos and Escondido, and further impeded by SR 78 and Mission Road. The construction of the Harmony Grove development further limits wildlife connectivity to the south of the site. Although the Project site is used by a variety of wildlife species it is not considered a regional corridor or linkage as connectivity to the north, south, and east is limited and the site does not provide connection to open space areas in these areas. Wildlife movement within and onto the site is primarily associated with local populations of species from along the western site boundary from Mt. Whitney Road north, which abuts existing rural residential development interspersed with chaparral–covered hillsides. The Project site, as well as off-site areas abutting the western site boundary, are not within a future PAMA and therefore would not be preserved under MSCP planning. Chaparral habitat to the west of the Project site provides connectivity to PAMA lands further west (Mt. Whitney/Double Peak area), which is the main wildlife corridor in the Project vicinity. The Project would preserve the majority of riparian resources present on site and would preserve approximately 47.5~~48.6~~ acres in the northwest corner of the site as a combination of 12.1 acres of biological open space and ~~36.5~~35.4 acres within an agricultural easement, connecting to off-site chaparral along an approximately 2,900-linear foot distance (Figure 16a). Although Project implementation would hinder large animal movement (e.g., deer) within the developed portions of the site, there is no existing corridor that continues across the site from the west to off-site preserved habitat in any direction and the Project site does not contain biological resources that are critical for regional movement of wildlife; therefore, no significant impact would occur under County Guideline 7.1.H.

7.1.I The Project is not located within the adopted MSCP Subarea Plan. Under County Guideline 7.1.I, no significant impact would occur.

7.1.J No listed species would be impacted by Project implementation. Under County Guideline 7.1.J, no significant impact would occur.

7.1.L Implementation of the proposed Project would not result in the take of eagles, eagle eggs, or any part of an eagle. Under County Guideline 7.1.L, no significant impact would occur.

7.3 CUMULATIVE IMPACT ANALYSIS

Each of the cumulative projects listed in Table 8 and discussed above would be required to conform to 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 10 of the 12 guidelines in Section 7.0. Mitigation is proposed to reduce the Project impacts to RPO wetlands and migratory birds. Conformance or mitigation, as appropriate, would be required for the proposed Project and for the other cumulative projects in order to obtain a recommendation for approval, thus no cumulative impacts would occur.

7.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Impact 7.4.1 The Project will impact 0.010~~0.18~~ acre of wetlands as outlined in the RPO, although no sensitive habitat lands occur on site.

MM 7.4.1 Implementation of MM 4.4.5 and MM 4.4.1b~~a and 4.4.1d~~ will mitigate for impacts to wetlands considered RPO. In addition, all preserved RPO wetlands are surrounded by a minimum 50-foot buffer, which is included in the biological open space.

Impact 7.4.2 Breeding migratory birds may temporarily or permanently leave their territories to avoid construction activities, which could lead to reduced reproductive success and increased mortality.

MM 7.4.2 In order to ensure compliance with the MBTA, grading or clearing of vegetation will occur outside of the breeding season of most avian species (February 1 to September 1). Grading or clearing during the breeding season of MBTA-covered species could occur with PDS approval and Wildlife Agency concurrence if it is determined that no nesting birds (or birds displaying breeding or nesting behavior) are present immediately prior to clearing. A pre-construction survey will be conducted within 7 days prior to clearing or grading activities to determine if breeding or nesting avian species occur within impact areas prior to project implementation.

7.5 CONCLUSION

Implementation of the proposed Project would result in potentially significant impacts to wetlands as defined by the RPO, and to breeding migratory birds. Off-site establishment and rehabilitation of wetlands and/or purchase of credits at an approved mitigation bank, as well as avoiding clearing of vegetation during the bird breeding season would reduce these impacts to less than significant.

8.0 SUMMARY OF PROJECT IMPACTS AND MITIGATION

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

Implementation of the proposed Project would result in direct impacts to the following special status species: Cooper's hawk, red-shouldered hawk, northern harrier, white-tailed kite, prairie falcon, turkey vulture, grasshopper sparrow, yellow warbler, western bluebird, and southern mule deer. In addition, Project implementation would impact raptor foraging habitat.

Implementation of the proposed Project would result in impacts to the following sensitive vegetation communities: ~~southern riparian forest, southern riparian woodland,~~ southern willow scrub, herbaceous wetland, mule fat scrub, disturbed wetland, coast live oak woodland, Diegan coastal sage scrub, granitic southern mixed chaparral, and non-native grassland.

~~Project implementation would result in impacts to USACE wetland WUS.~~

Mitigation for impacts to sensitive vegetation communities and County Group 1 sensitive animal species (Cooper's hawk, red-shouldered hawk, northern harrier, white-tailed kite, prairie falcon, turkey vulture, and grasshopper sparrow) would occur through off-site preservation of habitat in areas with long-term conservation value for a variety of species (Table 9), and is proposed to occur through one or more of the following: purchase of credits at the San Luis Rey Mitigation Bank and the future Brook Forest Conservation Bank, or off-site acquisition and preservation of land within the NC MSCP PAMA boundaries, or other location deemed acceptable by the County and Wildlife Agencies. Project impacts to County Group 2 sensitive animal species (yellow warbler, western bluebird, and southern mule deer) are considered less than significant and no mitigation is required.

Impacts to USACE and CDFW jurisdictional areas would be mitigated by purchase of credits at the San Luis Rey Mitigation Bank, or other acceptable location as determined in consultation with these agencies (Table 9). Long-term habitat management would be provided for all off-site preservation areas.

With implementation of the MMs listed in Sections 3.4, 4.4, ~~5.4,~~ and 7.4 for significant impacts to sensitive biological resources, all Project-specific impacts would be mitigated to less than significant. Table 10 provides a summary of the proposed MMs. In addition, the following

design features would be implemented as part of the Project to further minimize impacts to biological resources:

1. A pre-construction meeting shall be held to ensure that construction crews are informed of the presence of sensitive resources in and adjacent to the Project site. Prior to commencement of clearing or grading activities, the approved limits of disturbance shall be identified in the field, and silt or orange fencing shall be installed to prevent errant disturbance by construction vehicles or personnel. All movement of construction contractors, including ingress and egress of equipment and personnel, shall be limited to designated construction zones. This fencing shall be removed upon completion of all construction activities.

2. Prior to initiating any construction-related activities, including clearing, grubbing, grading and construction, a qualified biological monitor shall be retained and shall be on-site during clearing, grubbing, and/or grading activities. The biological monitor shall attend all pre-construction meetings and be present during the removal of any vegetation to ensure that the approved limits of disturbance are not exceeded and provide periodic monitoring of the impact area including, but not limited to, trenches, stockpiles, storage areas and protective fencing. The biological monitor would relocate sensitive wildlife species (such as orange-throated whiptail, coastal rosy boa, red diamond rattlesnake, etc.) that may become trapped in ditches or other construction-related features to areas outside the work limits.

3. Focused surveys to determine presence or absence of bat colonies and/or bat nursery sites will be conducted within any structures to be demolished or hollow trees to be removed on the Project site. Surveys will begin a maximum of seven days prior to structure demolition or tree removal and one survey will be conducted the day immediately prior to the initiation of work. If any bat colonies and/or bat nursery sites are found within any structure(s) or hollow tree(s), demolition of the structure(s) or removal of the tree(s) shall be postponed until the nursery/breeding activity ends. If bat roosting sites are found, demolition of the structure(s) or removal of the tree(s) shall be postponed until the bats are excluded from the structure(s). A copy of the survey results shall be submitted for approval to the PDS prior to the demolition of any structure(s) or removal of any hollow tree(s) on the Project site

~~1.~~4. Brushing, clearing, and grading activities within 100 feet of biological open space easements would not be permitted during the avian breeding season (February 15 through August 31).

~~2.~~5. Native topsoil (top three to five inches) would be salvaged and stockpiled within a disturbed on-site location. Stockpiles would not be greater than six feet high and would not be mixed with other excavated materials. Following completion of construction activities, stockpiled native topsoil would be re-spread as applicable.

~~3.~~6. The construction site would maintain adequate storm water BMPs (erosion) and air quality control (dust).

7. Grading plan notes will require temporary protective fencing to keep construction equipment and people out of sensitive habitats that are not proposed to be graded.

~~4.~~8. The Project would comply with wet weather grading restrictions (October 1 to April 30) to avoid habitat damage in applicable locations.

~~5.~~9. As shown on the conceptual landscape plan, Project landscaping would exclude exotic invasive pest plants and require native vegetation (i.e., species not listed on the California Invasive Plant Inventory prepared by the California Invasive Plant Council [Cal-IPC; 2007]).

~~6.~~10. The Project would not accelerate or increase storm water or non-storm water flows to sensitive downstream areas.

~~7.~~11. All Project-related lighting would be required by the D Designator Site Plan to adhere to Division 9 of the County Light Pollution Code (LPC). Lighting within the Project footprint adjacent to undeveloped habitat would be of the lowest illumination allowed for human safety, selectively placed, shielded and directed away from these sensitive habitats.

~~8.~~12. Biological open space areas would be fenced off from the proposed development.

~~9.~~13. Signage would be placed along the edge of the biological open space area to deter human incursion.

~~10.~~14. RPO wetlands and buffers (at least 50 feet) would be preserved within biological open space easements dedicated on the Final Map.

~~11.~~15. Each biological open space easement would be surrounded by a Limited Building Zone easement dedicated on the Final Map that does not allow any structures, in order to prevent fire clearing from extending into biological open space.

16. The southernmost entrance road into Neighborhood 5 would include a con-span bridge measuring 20 feet wide by 6 feet high with an earthen bottom. This Project Design Feature would allow for local movement of aquatic and terrestrial species between the on-site and off-site open space and is of sufficient size for deer to pass through, thereby reducing the potential for road mortality to wildlife.

Table 9
IMPACTS AND MITIGATION FOR HABITAT/VEGETATION COMMUNITIES (acre[s])[1]

VEGETATION COMMUNITY/HABITAT[2]	TIER	ACREAGE			MITIGATION				
		Existing	On-site Impacts	Off-site Impacts	Mitigation Ratio	Required	Preserved On Site[3]	Impact Neutral[4]	Off-site Mitigation
Southern Riparian Forest (61300)	I	2.50	~~0.17~~ 0.00	--	~~3:1~~ --	~~0.51~~ --	2.50~~33~~	2.50~~33~~	~~0.51~~ --
Southern Riparian Woodland – including disturbed (62000)	I	0.29	0.00	--	--	--	0.27	0.29	--
Southern Willow Scrub (63320)	I	0.15	0.04	--	3:1	0.12	0.11	0.11	0.12
Mule Fat Scrub (63310)	I	0.02	0.01	--	3:1	0.03	0.01	0.01	0.03
Freshwater Marsh (52400)	I	0.12	0.00	--	3:1	--	0.12	0.12	--
Herbaceous Wetland (52510)	I	0.35	0.02	--	3:1	0.06	0.33	0.33	0.06
Disturbed Wetland (11200)	I	0.13	0.08	--	3:1	0.24	0.05	0.05	0.24
Open Water/Pond (64140)	--	0.51	0.00	--	--	--	0.17	0.51	--
Tamarisk Scrub (63810)	--	0.04	0.04	--	--	--	--	--	--
Coast Live Oak Woodland – including disturbed (71160)	I	11.7	6.2~~7~~	--	2:1 to 3:1[5]	~~20.4~~19.5[6]	~~4.2~~4.3	3.3	~~20.4~~19.5
Diegan Coastal Sage Scrub - including disturbed (32500)	II	1.8	~~1.0~~0.2	--[11]	2:1	3.6[7]	~~0.7~~1.3	0.6	3.6
Southern Mixed Chaparral - including disturbed (37121)	III	8.0	3.0~~1~~	--	0.5:1	1.5~~6~~	~~4.8~~4.7	0.6	1.5~~6~~
Eucalyptus Forest (79100)	--	7.2	4.6	--	--	--	1.7	--	--
Eucalyptus Woodland (79100)	IV	3.5	1.3~~4~~	--	--	--	2.1	--	--
Non-native Grassland (42200)	III	63.9	~~53.8~~ 49.7	~~-~~-0.2	1:1[8]	~~53.1~~ 49.1[8]	~~6.5~~ 8.4	~~3.4~~ 3.7	~~53.1~~ 49.1
Non-native Vegetation (11000)	--	1.5	1.0	--	--	--	0.3	--	--
Orchard (18100)	IV	100.2	~~60.6~~ 62.0	--	--	--	3.9[9]	--	--
Intensive Agriculture (18200)	IV	8.8	6.9	--	--	--	0.1	--	--
Extensive Agriculture (18300)	IV	21.3	20.3~~5~~	--	0.5:1[10]	10.2~~3~~	0.3	--	10.2~~3~~

Table 9 (cont.)
IMPACTS AND MITIGATION FOR HABITAT/VEGETATION COMMUNITIES (acre[s])[1]

VEGETATION COMMUNITY/HABITAT[2]	TIER	ACREAGE			MITIGATION				
		Existing	On-site Impacts	Off-site Impacts	Mitigation Ratio	Required	Preserved On Site[3]	Impact Neutral[4]	Off-site Mitigation
Disturbed Habitat (11300)	IV	2.4	2.1	0.2~~1~~	--	--	0.2	--	--
Developed Land (12000)	IV	4.1	2.4~~9~~	1.5~~4~~	--	--	0.2~~--~~	--	--
TOTAL		**238.8**	**~~164.9~~ 159.9**	**1.9~~5~~**	**--**	**~~90.0~~ 84.4**	**~~28.2~~ 31.2**	**~~11.7~~ 12.1**	**~~90.0~~ 84.4**

1 Upland habitats are rounded to the nearest 0.1 acre and wetland habitats are rounded to the nearest 0.01, thus totals reflect rounding.
2 Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008).
3 In Biological Open Space (BOS).
4 Includes all preserved RPO wetlands and their buffers, as well as RPO wetlands occurring within the SDG&E easement (which are not impacted by the project but, per County direction, cannot be placed into an open space easement).
5 Mitigation provided at a 2:1 ratio for 2.1~~4~~ acres of woodland to be placed within the Oak Tree Protection Easement in the LBZ and at a 3:1 ratio for 4.1~~3~~ acres of direct development and fuel modification impacts.
6 Includes 3.0~~2.7~~ acres of mitigation for impacts to 1.0~~0.9~~ acre of oak woodland buffer, per County requirements (comprised of 0.8~~7~~ acre of non-native grassland, ~~and~~ 0.1~~2~~ acre of eucalyptus woodland, and 0.1 acre combined impacts to extensive agriculture, southern mixed chaparral, and eucalyptus forest).
7 Per direction from USFWS, all coastal sage scrub occurring on site is considered impacted and mitigation is required at 2:1.
8 A total of 0.8~~7~~ acre of grassland impacts occur within the oak woodland buffer zone and would be mitigated at 3:1 for impacts to oak woodland; thus the 48.9~~53.1~~ acres of grassland mitigation instead of 49.7~~53.8~~ acres. See footnote 6, above.
9 An additional 35.5~~36.5~~ acres of orchard adjacent to biological open space will be preserved in the northwest corner under an agricultural easement.
10 County guidelines require mitigation at 0.5:1 for impacts to extensive agriculture consisting of field/pasture lands.
11 0.01 acre of Diegan coastal sage scrub would be impacted off site. This does not change the total impacts, which have been rounded to the nearest tenth acre.

Table 10
SUMMARY OF MITIGATION MEASURES

PROPOSED MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER(S)†
MM 3.4.1 Mitigation for impacts to non-native grassland (typically a 0.5:1 ratio) must include impacts to sensitive species (grasshopper sparrow and raptors) which increases the mitigation ratio to 1:1, for a mitigation requirement of 49.1~~53.1~~ acres[4]. Mitigation for impacts to extensive agriculture, which provides more limited habitat value to species, will occur at the base ratio of 0.5:1, for a mitigation requirement of 10.2~~3~~ acres. Mitigation for impacts to raptor foraging habitat and grasshopper sparrow habitat would occur through one or a combination of the following: off-site preservation of grassland habitat and/or other like-functioning habitat within the NC MSCP PAMA boundaries, or purchase of grassland credits or like-functioning habitat at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies. The 0.6 acre of mitigation for non-native grassland and 10.2~~3~~ acres of mitigation for extensive agriculture within the Elfin Forest Harmony Grove Community Plan shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.	Less than significant	3.1.B 3.1.F
MM 3.4.2 No grubbing, clearing, or grading within 300 feet of an active raptor nest during the raptor-breeding season (February 1 to July 15) will occur. As such, all grading permits, improvement plans, and the final map will state the same. If grubbing, clearing, or grading would occur during the raptor-breeding season, a pre-grading survey will be conducted within 3 days prior to grading to determine if raptors occur within the areas directly impacted by grading or indirectly impacted by noise. If there are no raptors nesting (includes nest building or other breeding/nesting behavior) within this area, development will be allowed to proceed. However, if raptors are observed nesting or displaying breeding/nesting behavior within the area, construction will be postponed until (1) all nesting (or breeding/nesting behavior) has ceased or until after July 15; or (2) a temporary noise barrier or berm will be constructed at the edge of the development footprint to reduce noise levels below 60 dB L_{EQ} or ambient (if ambient is greater than 60 dB L_{EQ}). Alternatively, the duration of construction equipment operation could be controlled to keep noise levels below 60 dB L_{EQ} or ambient in lieu of or in concert with a wall or other sound attenuation barrier.	Less than significant	3.1.L 7.1.K

[4] 49.1~~53.1~~ acres of grassland mitigation would be provided for impacts to 49.9~~53.8~~ acres of non-native grassland. The remaining 0.8~~7~~ acre would be mitigated through oak woodland mitigation, as impacts to 0.8~~7~~ acre of non-native grassland occur within the oak root zone as defined by the County and are considered impacts to oak woodland.

Table 10 (cont.)
SUMMARY OF MITIGATION MEASURES

PROPOSED MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER(S)†
~~*MM 4.4.1a* Mitigation for impacts to 0.17 acre of southern riparian forest will be mitigated at a 3:1 ratio through the purchase of 0.51 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies. Mitigation shall include a minimum of 1:1 creation/establishment, with the remainder comprised of restoration or enhancement.~~	~~Less than significant~~	~~4.1.A~~
MM 4.4.1a~~b~~ Mitigation for impacts to 0.04 acre of southern willow scrub will be mitigated at a 3:1 ratio by the purchase of 0.12 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.~~.~~ Mitigation shall include a minimum of 1:1 creation/establishment, with the remainder comprised of restoration or enhancement.	Less than significant	4.1.A
MM 4.4.1b~~c~~ Mitigation for impacts to 0.01 acre of mule fat scrub will be mitigated at a 3:1 ratio by the purchase of 0.03 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies. Mitigation shall include a minimum of 1:1 creation/establishment, with the remainder comprised of restoration or enhancement.	Less than significant	4.1.A
MM 4.4.1c~~d~~ Mitigation for impacts to 0.02 acre of herbaceous wetland will be mitigated at a 3:1 ratio the purchase of 0.06 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies. Mitigation shall include a minimum of 1:1 creation/establishment, with the remainder comprised of restoration or enhancement.	Less than significant	4.1.A
MM 4.4.1d~~e~~ Mitigation for impacts to 0.08 acre of disturbed wetland will be mitigated at a 3:1 ratio by the purchase of 0.24 acre of wetland credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies. Mitigation shall include a minimum of 1:1 creation/establishment, with the remainder comprised of restoration or enhancement.	Less than significant	4.1.A
MM 4.4.1e~~f~~ Mitigation for impacts to 6.2~~7~~ acres of coast live oak woodland and 1.0~~0.9~~ acre of oak woodland buffer (consisting of 0.8~~7~~ acre non-native grassland, ~~and 0.2~~0.1 acre of eucalyptus woodland, and 0.1 acre of combined extensive agriculture, southern mixed chaparral, and eucalyptus forest) will be mitigated at a 2:1 ratio for the 2.1~~4~~ acres occurring within the Limited Building Zone around biological open space, and at a 3:1 ratio for the remaining 4.1~~3~~ acres of impact and	Less than significant	4.1.A

Table 10 (cont.)
SUMMARY OF MITIGATION MEASURES

PROPOSED MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER(S)†
1.0~~0.9~~ acre of buffer impact. A 2.1~~4~~-acre Oak Tree Protection Easement would be recorded over the 2.1~~4~~ acres of coast live oak woodland remaining within the LBZ, which would limit fuel modification to clearing of the understory and prohibit the removal of mature oak trees. Mitigation would be accomplished through one or a combination of the following: the purchase of 19.5~~20.4~~ acres of oak woodland, oak riparian woodland, or oak riparian forest credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies, and/or off-site acquisition and preservation of land within the NC MSCP PAMA boundaries containing oak woodland, oak riparian woodland, or oak riparian forest. The 11.2~~9.8~~ acres of mitigation for oak woodland within the EFHGCP shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.		
MM 4.4.1f~~g~~ Mitigation for direct impacts to 0.2~~1.0~~ acre of Diegan coastal sage scrub and indirect impacts to 1.6~~0.8~~ acres of Diegan coastal sage scrub will be mitigated at a 2:1 ratio through purchase of 3.6 acres of coastal sage scrub credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies; and/or off-site acquisition and preservation of land within the NC MSCP PAMA boundaries containing Diegan coastal sage scrub. The 0.2 of mitigation for coastal sage scrub within the EFHGCP shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.	Less than significant	4.1.A
MM 4.4.1g~~h~~ Mitigation for impacts to 3.0~~1~~ acres of granitic southern mixed chaparral will be mitigated at a 0.5:1 ratio through one or a combination of the following: the purchase of 1.5~~6~~ acres of chaparral credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies; or off-site acquisition and preservation of land within the NC MSCP PAMA boundaries containing southern mixed chaparral.	Less than significant	4.1.A
MM 4.4.1g~~i~~ Mitigation for impacts to 49.9~~53.8~~ acres of non-native grassland will occur at a 1:1 ratio through one or a combination of the following: off-site preservation of 49.1~~53.1~~ acres[5] of grassland habitat and/or other like-functioning habitat	Less than significant	4.1.A

[5] 49.1~~53.1~~ acres of grassland mitigation would be provided for impacts to 49.9~~53.8~~ acres of non-native grassland. The remaining 0.8~~7~~ acre would be mitigated through oak woodland mitigation, as impacts to 0.8~~7~~ acre of non-native grassland occur within the oak root zone as defined by the County and are considered impacts to oak woodland. See MM 4.4.1e~~f~~.

Table 10 (cont.) **SUMMARY OF MITIGATION MEASURES**		
PROPOSED MITIGATION	**LEVEL OF SIGNIFICANCE AFTER MITIGATION**	**GUIDELINE NUMBER(S)†**
within the NC MSCP PAMA boundaries, or purchase of 49.15~~3.1~~ acres of grassland credits at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies. Impacts to 20.3~~5~~ acres of extensive agriculture will be mitigated at the base ratio of 0.5:1, for a mitigation requirement of 10.2~~3~~ acres through one or a combination of the following: off-site preservation of 10.2~~3~~ acres of pasture or grassland habitat and/or other like-functioning habitat within the NCMSCP PAMA boundaries, or purchase of 10.2~~3~~ acres of grassland credits or other habitat suitable for raptor foraging at an approved mitigation bank such as the future Brook Forest Conservation Bank or other location deemed acceptable by the County and Wildlife Agencies. The 0.6 acre of mitigation for non-native grassland and 10.2~~3~~ acres of mitigation for extensive agriculture within the EFHGCP shall demonstrate conformance with the EFHGCP to the satisfaction of the Director of PDS.		
MM 4.4.2 Impacts to USACE jurisdictional areas would require regulatory approval by the USACE and RWQCB. These approvals consist of a CWA Section 404 Nationwide Permit from USACE and CWA Section 401 Water Quality Certification from RWQCB. ~~Impacts to 0.02 acre of USACE herbaceous wetland will be mitigated at a 3:1 ratio as described in MM 4.4.1d.~~ Impacts to 0.19 acre of non-wetland WUS will be mitigated by purchase of 0.19 credits at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies. All mitigation for WUS would occur in consultation with the USACE.	Less than significant	4.1.B
MM 4.4.3 Impacts to CDFW jurisdictional areas would require regulatory approval by the CDFW. This approval consists of a SAA from CDFW pursuant to Section 1600 of the California Fish and Game Code. Impacts to 0.50~~66~~ acre of vegetated CDFW jurisdictional areas will be mitigated by the implementation of MMs ~~4.4.1a (southern riparian forest),~~ 4.4.1a~~b~~ (southern willow scrub), 4.4.1b~~c~~ (mule fat scrub), 4.4.1e~~f~~ (coast live oak woodland), 4.4.1c~~d~~ (herbaceous wetland) and 4.4.1d~~e~~ (disturbed wetland). Mitigation for impacts to CDFW streambed is described in MM 4.4.4.	Less than significant	4.1.B
MM 4.4.4 Impacts to 0.26 acre of CDFW streambed will be mitigated by the implementation of MM 4.4.2, plus purchase of an additional 0.07 acre of credit at the San Luis Rey Mitigation Bank, or other location deemed acceptable by the County and Regulatory Agencies.	Less than significant	4.1.B

Table 10 (cont.) **SUMMARY OF MITIGATION MEASURES**		
PROPOSED MITIGATION	**LEVEL OF SIGNIFICANCE AFTER MITIGATION**	**GUIDELINE NUMBER(S)†**
MM 4.4.5 Mitigation for impacts to 0.010.18 acre of County RPO wetlands will be provided by the implementation of MMs 4.4.1ba and 4.4.1c.	Less than significant	4.1.B
~~*MM 5.4.1* Mitigation for impacts to 0.02 acre of herbaceous wetland WUS will be provided through implementation of MM 4.4.1d.~~	~~Less than significant~~	~~5.1.A~~
MM 7.4.1 Mitigation for impacts to 0.010.18 acre of RPO wetland will be provided through implementation of MMs 4.4.1ba and 4.4.1c.	Less than significant	7.1.C
MM 7.4.2 In order to ensure compliance with the MBTA, grading or clearing of vegetation will occur outside of the breeding season of most avian species (February 1 to September 1). Grading or clearing during the breeding season of MBTA-covered species could occur with PDS approval and Wildlife Agency concurrence if it is determined that no nesting birds (or birds displaying breeding or nesting behavior) are present immediately prior to clearing. A pre-construction survey will be conducted within 7 days prior to clearing or grading activities to determine if breeding or nesting avian species occur within impact areas prior to project implementation.	Less than significant	7.1.K

†Corresponding to County Guideline numbering as listed in this report.

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Appendix A

PLANT SPECIES OBSERVED

Appendix A
PLANT SPECIES OBSERVED
VALIANO PROJECT

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Dicotyledons			
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	blue elderberry	DCSS
Aizoaceae	*Aptenia cordifolia**	heartleaf iceplant	CLOW
Anacardiaceae	*Malosma laurina*	laurel sumac	CLOW, NNG, SMC
	Rhus integrifolia	lemonadeberry	DCSS, EUCF, EUCW, NNG, SMC
	*Schinus molle**	Peruvian pepper tree	CLOW, EUCF, EUCW, NNV, SRF
	*Schinus terebinthifolius**	Brazilian pepper tree	CLOW, DEV, EXAG, SWS
	Toxicodendron diversilobum	poison oak	CLOW
Apiaceae	*Apium graveolens**	celery	EUCF, FWM, SRW
	*Conium maculatum**	poison-hemlock	CLOW, SRF
	*Foeniculum vulgare**	fennel	NNG
Apocynaceae	*Nerium oleander**	oleander	DEV
	*Vinca major**	greater periwinkle	CLOW, EUCF
Asclepiadaceae	*Asclepias fascicularis*	narrow-leaf milkweed	EXAG, NNG
Asteraceae	*Ambrosia psilostachya*	western ragweed	DW, EUCF, EXAG, NNG
	Artemisia californica	California sagebrush	DCSS, SMC
	Baccharis pilularis	coyote brush	EUCF, NNG, SMC
	Baccharis salicifolia	mule fat	MFS, SRF
	Baccharis sarothroides	broom baccharis	DCSS
	*Bidens pilosa**	common beggar's tick	ORCH
	Brickellia californica	California brickellbush	SMC
	*Carduus pycnocephalus**	Italian thistle	CLOW, NNG, SRF, SRW
	*Centaurea melitensis**	star thistle	DCSS, NNG, SMC
	Corethrogyne filaginifolia	California-aster	NNG, SMC
	*Cotula coronopifolia**	African brass-buttons	FWM
	Deinandra fasciculata	fascicled tarplant	DCSS
	*Erigeron canadensis**	horseweed	CLOW, DH, NNG, ORCH

Appendix A (cont.)
PLANT SPECIES OBSERVED
VALIANO PROJECT

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Dicotyledons (cont.)			
Asteraceae (cont.)	*Eriophyllum confertiflorum*	golden yarrow	SMC
	Euthamia occidentalis	western goldenrod	HW, SRF
	*Gazania linearis**	gazania	NNG
	*Glebionis coronaria**	garland daisy	DH
	Grindelia camporum	gum plant	NNG
	Hazardia squarrosa var. *grindelioides*	saw-toothed goldenbush	DCSS, NNG, SMC
	*Hedypnois cretica**	Crete weed	EXAG
	Helianthus gracilis	slender sunflower	NNG
	*Helminthotheca echioides**	bristly ox-tongue	DW, EUCF, EXAG, HW, NNG, SRW
	Heterotheca grandiflora	telegraph weed	NNG
	*Hypochaeris glabra**	smooth cat's-ear	NNG
	Isocoma menziesii	goldenbush	EUCF, NNG
	*Lactuca serriola**	wild lettuce	EUCF, EXAG, NNG
	*Matricaria discoidea**	pineapple weed	NNG
	Osmadenia tenella	osmadenia	NNG
	*Senecio vulgaris**	common groundsel	NNG
	*Silybum marianum**	milk thistle	CLOW, NNG
	*Sonchus asper**	prickly sow thistle	ORCH, SRF
	*Sonchus oleraceus**	common sow thistle	CLOW, NNG
	Stylocline gnaphaloides	everlasting nest straw	NNG
	*Tragopogon dubius**	salsify	NNG
	Uropappus lindleyi	silver puffs	NNG, SMC
	Xanthium strumarium	cocklebur	EUCF
Bignoniaceae	*Catalpa speciosa**	northern catalpa	EUCF, EUCW
	Phacelia cicutaria	caterpillar phacelia	SMC
Boraginaceae	*Amsinckia intermedia*	rancher's fiddleneck	NNG
	Heliotropium curassavicum var. *occulatum*	salt heliotrope	DW, NNG, EUCF
Brassicaceae	*Brassica nigra**	black mustard	EXAG, NNG
	*Hirschfeldia incana**	shortpod mustard	DCSS, DH, EXAG, NNG
	Nasturtium officinale	water cress	DW,SRF, SWS

Appendix A (cont.)
PLANT SPECIES OBSERVED
VALIANO PROJECT

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Dicotyledons (cont.)			
Brassicaceae (cont.)	*Raphanus sativus**	wild radish	DW, EUCF, EXAG, HW, NNG, SRF
	Sisymbrium sp.*	mustard	EXAG
Cactaceae	*Opuntia ficus-indica**	Indian-fig	DH
	Opuntia littoralis	coastal prickly pear	DCSS
Caprifoliaceae	*Lonicera subspicata*	southern honeysuckle	NNG, SMC
Caryophyllaceae	*Cerastium glomeratum**	mouse-ear chickweed	EUCW
	*Polycarpon tetraphyllum**	polycarp	DH
	*Silene gallica**	windmill pink	DH
	*Stellaria media**	common chickweed	CLOW
Chenopodiaceae	*Amaranthus albus**	white tumbleweed	ORCH
	*Atriplex prostrata**	hastate orache	EUCF, NNG, SRW
	*Atriplex semibaccata**	Australian saltbush	EXAG, NNG
	*Salsola tragus**	Russian thistle	EXAG, NNG
Cistaceae	*Helianthemum scoparium*	rock rose	SMC
Convulvulaceae	*Convolvulus arvensis**	bindweed	NNG
Crassulaceae	*Crassula ovata**	jade plant	EUCW
Cucurbitaceae	*Marah macrocarpa*	wild cucumber	DCSS, CLOW, EUCW
Ericaceae	*Xylococcus bicolor*	mission manzanita	SMC
Euphorbiaceae	*Chamaesyce maculata**	spotted spurge	ORCH
	Croton setigerus	dove weed	NNG
	*Euphorbia peplus**	petty spurge	CLOW, NNG
	*Ricinus communis**	castor-bean	DH
Fabaceae	*Acacia baileyana**	cootamundra wattle	NNV
	*Acacia longifolia**	golden wattle	NNV, SRF
	Acmispon americanus	Spanish lotus	DCSS
	Acmispon glaber	deerweed	SMC
	*Medicago polymorpha**	bur-clover	NNG
	*Trifolium hirtum**	rose clover	EXAG
	*Vicia villosa**	winter vetch	NNG
Fagaceae	*Quercus agrifolia* var. *agrifolia*	coast live oak	CLOW, DH, EUDF, NNG, ORCH, SMC, SRF, SRW, SWS

Appendix A (cont.)
PLANT SPECIES OBSERVED
VALIANO PROJECT

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Dicotyledons (cont.)			
Gentianaceae	*Zeltnera venusta*	canchalagua	SMC
Geraniaceae	*Erodium botrys**	long-beak filaree	DCSS, NNG
	*Erodium moschatum**	green-stem filaree	DH, NNG, ORCH
	*Geranium carolinianum**	Carolina geranium	NNG
Juglandaceae	*Carya illinoinensis**	pecan	SRF
Lamiaceae	*Marrubium vulgare**	horehound	NNG, SRF
	Salvia apiana	white sage	EXAG, NNG
	Salvia mellifera	black sage	CLOW, DCSS, NNG, SMC
	Stachys ajugoides	hedge nettle	SMC
Lauraceae	*Persea americana**	avocado	ORCH
Malvaceae	*Malva parviflora**	cheeseweed	EXAG, NNG
	Sidalcea malviflora	checkerbloom	CLOW
Myrtaceae	*Eucalyptus camaldulensis**	red gum	EUCF, SRW
	Eucalyptus sp.*	eucalyptus	DH, EUCW
Oleaceae	*Fraxinus uhdei**	shamel ash	SRF
	*Olea europaea**	olive	CLOW, DH, EUCF, NNV
Onagraceae	*Clarkia purpurea* ssp. *quadrivulnera*	wine-cup clarkia	EXAG, NNG
	Epilobium ciliatum ssp. *ciliatum*	willow herb	DW, NNG, SRF
	Oenothera elata ssp. *hirsutissima*	great marsh evening-primrose	CLOW, HW
Oxalidaceae	*Oxalis pes-caprae**	Bermuda-buttercup	NNG
Papaveraceae	*Eschscholzia californica*	California poppy	NNG
Phrymaceae	*Mimulus aurantiacus*	monkey-flower	DCSS, SMC
Plantaginaceae	*Antirrhinum nuttallianum*	Nuttall's snapdragon	SMC
	Penstemon sp.	penstemon	SMC
	Plantago erecta	dwarf plantain	SMC
	*Plantago lanceolata**	English plantain	NNG
	*Plantago major**	common plantain	EUCF
Plumbaginaceae	*Limonium sinuatum**	Mediterranean sea-lavender	DCSS, NNG

Appendix A (cont.)
PLANT SPECIES OBSERVED
VALIANO PROJECT

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Dicotyledons (cont.)			
Polygonaceae	*Eriogonum fasciculatum*	buckwheat	DCSS, NNG
	*Rumex conglomeratus**	dock	SRW
	*Rumex crispus**	curly dock	DW, EUCF, EXAG, HW, NNG, SWS
	Rumex salicifolius	willow dock	EUCF
Portulacaceae	*Claytonia perfoliata* ssp. *perfoliata*	miner's lettuce	CLOW, EUCW
Primulaceae	*Anagallis arvensis**	scarlet pimpernel	CLOW, EXAG, NNG
Proteaceae	*Grevillea robusta**	silk-oak	EUCF
Rhamnaceae	*Ceanothus tomentosus*	Ramona ceanothus	NNG, SMC
	Rhamnus crocea	spiny redberry	SMC
	Rhamnus ilicifolia	holly-leaf redberry	CLOW, SMC
Rosaceae	*Adenostoma fasciculatum*	chamise	NNG, SMC
	Cercocarpus betuloides	mountain mahogany	SMC
	Heteromeles arbutifolia	toyon	CLOW, SMC
Rubiaceae	*Galium aparine*	prickly bedstraw	CLOW
Rutaceae	*Citrus* sp.*	citrus	ORCH
	Cneoridium dumosum	bush-rue	SMC
Salicaceae	*Salix gooddingii*	Goodding's black willow	SRF, SRW
	Salix laevigata	red willow	SRF, SRW, SWS
	Salix lasiolepis	arroyo willow	EUCF, SRF, SRW, SWS
Saururaceae	*Anemopsis californica*	yerba mansa	HW, SRF
Saxifragaceae	*Jepsonia parryi*	coast jepsonia	CLOW
Scrophulariaceae	*Scrophularia californica*	California figwort	DCSS
Simaroubaceae	*Ailanthus altissima**	tree of heaven	NNG, SRF
Solanaceae	*Nicotiana glauca**	tree tobacco	DCSS, SRF
	*Solanum elaeagnifolium**	white horse-nettle	DH
	Solanum parishii	Parish nightshade	NNG
Tamaricaceae	*Tamarix* sp.*	tamarisk	TS
Urticaceae	*Urtica dioica* ssp. *holosericea*	stinging nettle	SRF
	*Urtica urens**	dwarf nettle	NNG

Appendix A (cont.)
PLANT SPECIES OBSERVED
VALIANO PROJECT

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Dicotyledons (cont.)			
Verbenaceae	*Lantana camara**	lantana	DEV
Vitaceae	*Vitis girdiana*	desert wild grape	SRF
Monocotyledons			
Arecaceae	*Phoenix canariensis**	Canary Island date palm	EUCF, NNG
	*Washingtonia robusta**	Mexican fan palm	DH, EUCF, HW, NNV, SRF, SRW, SWS
Cyperaceae	*Bolboschoenus maritimus* ssp. *paludosus*	prairie bulrush	EUCF
	Cyperus eragrostis	tall flatsedge	DW, HW, SWS
	Cyperus sp.	umbrella sedge	EUCF, SRF
	Eleocharis macrostachya	pale spike-rush	EUCF
	Eleocharis montevidensis	slender creeping spike-rush	SRW
	Schoenoplectus californicus	California bulrush	SRF
Iridaceae	*Sisyrinchium bellum*	blue-eyed grass	NNG
Juncaceae	*Juncus bufonius*	toad rush	NNG
	Juncus mexicanus	Mexican rush	HW, NNG
	Juncus phaeocephalus	brown-headed rush	SRW
	Juncus rugulosus	wrinkled rush	HW
Lemnaceae	*Lemna sp.*	duckweed	FWM
Liliaceae	*Aloe vera**	aloe vera	EUCF
	Calochortus splendens	splendid mariposa lily	NNG
Melanthiaceae	*Toxicoscordion fremontii*	star lily	NNG
Poaceae	*Arundo donax**	giant reed	SRW
	*Avena barbata**	slender wild oat	EXAG, NNG, SRW
	*Avena fatua**	wild oat	NNG
	Avena sp.*	oats	CLOW, DCSS, DW, NNG
	*Brachypodium distachyon**	purple falsebrome	EXAG, NNG
	*Bromus diandrus**	common ripgut grass	CLOW, EUCW, EXAG, NNG, SMC

Appendix A (cont.)
PLANT SPECIES OBSERVED
VALIANO PROJECT

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Monocotyledons (cont.)			
Poaceae (cont.)	*Bromus hordeaceus**	soft chess	CLOW, DCSS, NNG
	*Bromus madritensis**	foxtail chess	EXAG, NNG
	Cortaderia sp.*	pampas grass	CLOW, SRF
	*Cynodon dactylon**	Bermuda grass	CLOW, DH, EUCF, NNG, SRF, SRW
	Distichlis spicata	saltgrass	EXAG, HW, NNG
	*Festuca myuros**	fescue	EXAG, NNG
	*Festuca perennis**	Italian ryegrass	DW, EXAG, NNG, SRF
	Hordeum sp.*	barley	CLOW, NNG
	Leptochloa fusca subsp. *uninervia*	Mexican sprangle-top	DW
	Muhlenbergia rigens	deergrass	CLOW
	*Paspalum dilatatum**	dallis grass	EUCF
	*Polypogon monspeliensis**	annual beard grass	DW
	Stipa cernua	nodding needlegrass	EXAG, NNG
	*Stipa miliacea**	smilo grass	EUCF, NNG, SWS
Themidaceae	*Dichelostemma capitatum*	blue dicks	EXAG, NNG, SMC
	Typha latifolia	broad-leaved cattail	SRF
Typhaceae	*Typha domingensis*	southern cattail	DW, FWM, SRF, SWS
	Typha sp.	cattail	SRF, FWM
Gymnosperms			
Pinaceae	*Pinus* sp.*	pine	EUCF

*Non-native species
**CLOW=coast live oak woodland; DCSS=Diegan coastal sage scrub; DH=disturbed habitat; DW=disturbed wetland; EUCF=eucalyptus forest; EUCW=eucalyptus woodland; EXAG=extensive agriculture; FWM=freshwater marsh; HW=herbaceous wetland; MFS=mule fat scrub; NNG=non-native grassland; NNV=non-native vegetation; ORCH=orchard; SMC=southern mixed chaparral; SRF=southern riparian forest; SRW=southern riparian woodland; SWS=southern willow scrub; TS=tamarisk scrub

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Appendix B

ANIMAL SPECIES OBSERVED OR DETECTED

Appendix B
ANIMAL SPECIES OBSERVED OR DETECTED
VALIANO PROJECT

TAXON	FAMILY	SCIENTIFC NAME	COMMON NAME
INVERTEBRATES			
Hymenoptera	Apidae	*Apis mellifera*	European honey bee
Lepidoptera	Pieridae	*Pieris rapae*	cabbage white
		Pontia protodice	checkered white
		Anthocharis sara	Sara orangetip
	Nymphalidae	*Nymphalis antiopa*	mourning cloak
		Vanessa cardui	painted lady
		Junonia coenia grisea	common buckeye
		Limenitis lorquini	Lorquin's admiral
		Polygonia satyrus	satyr anglewing
		Danaus plexippus	monarch
	Papilionidae	*Papilio rutulus*	western tiger swallowtail
VERTEBRATES			
Amphibians			
Anura	Hylidae	*Pseudacris regilla*	Pacific tree frog
Reptiles			
Squamata	Phrynosomatidae	*Sceloporus occidentalis*	western fence lizard
		Uta stansburiana	common side-blotched lizard
	Colubridae	*Pituophis catenifer*	gopher snake
	Lampropelidae	*Lampropeltis getula*	California kingsnake
Birds			
Accipitriformes	Cathartidae	*Cathartes aura*	turkey vulture†
Aphodiformes	Trochilidae	*Calypte anna*	Anna's hummingbird
		Calypte costae	Costa's hummingbird

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED
VALIANO PROJECT

TAXON	FAMILY	SCIENTIFC NAME	COMMON NAME
VERTEBRATES (cont.)			
Birds (cont.)			
Apodiformes (cont.)	Apodidae	*Aeronautes saxatalis*	white-throated swift
Charadriiformes	Charadriidae	*Charadrius vociferus*	killdeer
Columbiformes	Columbidae	*Columba livia*	rock pigeon
		Columbina passerine	common ground dove
		Zenaida macroura	mourning dove
Cuculiformes	Cuculidae	*Geococcyx californianus*	greater roadrunner
Falconiformes	Accipitridae	*Accipiter cooperii*	Cooper's hawk†
		Buteo jamaicensis	red-tailed hawk
		Buteo lineatus	red-shouldered hawk†
		Circus cyaneus	northern harrier†
		Elanus leucurus	white-tailed kite†
	Falconidae	*Falco mexicanus*	prairie falcon†
		Falco sparverius	American kestrel
Strigiformes	Strigidae	*Bubo virginianus*	great horned owl
Anseriformes	Anatidae	*Anas platyrhynchos*	mallard
Galliformes	Odontophoridae	*Callipepla californica*	California quail
Gruiformes	Rallidae	*Fulica americana*	American coot
Passeriformes	Aegithalidae	*Psaltriparus minimus*	bushtit
	Cardinalidae	*Passerina caerulea*	blue grosbeak
		Pheucticus melanocephalus	black-headed grosbeak
	Corvidae	*Aphelocoma californica*	western scrub jay
		Corvus brachyrhynchos	American crow
		Corvus corax	common raven
	Emberizidae	*Ammodramus savannarum*	grasshopper sparrow†
		Chondestes grammacus	lark sparrow
		Melospiza melodia	song sparrow
		Pipilo crissalis	California towhee
		Pipilo maculatus	spotted towhee
		Zonotrichia leucophrys	white-crowned sparrow
	Fringillidae	*Carduelis psaltria*	lesser goldfinch
		Carpodacus mexicanus	house finch

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED
VALIANO PROJECT

TAXON	FAMILY	SCIENTIFC NAME	COMMON NAME
VERTEBRATES (cont.)			
Birds (cont.)			
Passeriformes (cont.)	Hirundidae	*Petrochelidon pyrrhonota*	cliff swallow
		Stelgidopteryx serripennis	northern rough-winged swallow
	Icteridae	*Agelaius phoeniceus*	red-winged blackbird
		Euphagus cyanocephalus	Brewer's blackbird
		Icterus bullockii	Bullock's oriole
		Molothrus ater	brown-headed cowbird
		Sturnella neglecta	western meadowlark
	Mimidae	*Mimus polyglottos*	northern mockingbird
	Paridae	*Baeolophus inornatus*	oak titmouse
	Parulidae	*Geothlypis trichas*	common yellowthroat
		Setophaga coronata	yellow-rumped warbler
		Setophaga petechia	yellow warbler†
		Vermivora celata	orange-crowned warbler
	Passeridae	*Passer domesticus*	house sparrow
	Ptilogonatidae	*Phainopepla nitens*	phainopepla
	Regulidae	*Regulus calendula*	ruby-crowned kinglet
	Sturnidae	*Sturnus vulgaris*	European starling
	Timaliidae	*Chamaea fasciata*	wrentit
	Troglodytidae	*Thryomanes bewickii*	Bewick's wren
		Troglodytes aedon	house wren
	Turdidae	*Sialia mexicana*	western bluebird†
	Tyrannidae	*Contopus sordidulus*	western wood pewee
		Myriarchus cinerascens	ash-throated flycatcher
		Sayornis nigricans	black phoebe
		Tyrannus vociferans	Cassin's kingbird
	Vireonidae	*Vireo gilvus*	warbling vireo

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED
VALIANO PROJECT

TAXON	FAMILY	SCIENTIFC NAME	COMMON NAME
VERTEBRATES (cont.)			
Birds (cont.)			
Pelicaniformes	Ardeidae	*Ardea alba*	great egret
Piciformes	Picidae	*Colaptes auratus*	northern flicker
		Melanerpes formicivorus	acorn woodpecker
		Picoides nuttallii	Nuttall's woodpecker
Suliformes	Phalacrocoracidae	*Phalacrocorax auritus*	double-crested cormorant
Mammals			
Artiodactyla	Cervidae	*Odocoileus hemionus fuliginata*	southern mule deer†
Carnivora	Canidae	*Canis latrans*	coyote
	Felidae	*Felis rufus*	bobcat
	Mephitidae	*Mephitis mephitis*	striped skunk
	Procyonidae	*Procyon lotor*	raccoon
Lagomorpha	Leporidae	*Sylvilagus audubonii*	desert cottontail
Rodentia	Geomyidae	*Thomomys bottae*	Botta's pocket gopher
	Heteromyidae	*Dipodomys* sp.	kangaroo rat
	Muridae	*Neotoma macrotis*	big-eared woodrat
	Sciuridae	*Spermophilus beecheyi*	California ground squirrel

†Sensitive species

Appendix C

SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

Appendix C
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR
VALIANO PROJECT

SPECIES	LISTING OR SENSITIVITY	BLOOMING PERIOD	POTENTIAL TO OCCUR
San Diego thorn-mint (*Acanthomintha ilicifolia*)	FT/SE CRPR 1B.1 County List A	April –June	Very low. Occurs on friable clay soils, often in open areas within grasslands. Clay soils not present on site.
California adolphia (*Adolphia californica*)	--/-- CRPR 2.1 County List B	December - May	Very low. Occurs on clay soils in dry canyons and washes in coastal sage scrub and chaparral. Clay soils not present on site.
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CRPR 1B.1 County List A	April – October	Low. Generally found along creeks or seasonal drainages along the periphery of willow riparian areas that are limited on site.
Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)	FE/-- CRPR 1B.1 County List A	December - June	Very low. Occurs in coastal San Diego County in maritime chaparral on sandy soils. Maritime chaparral not present on this inland site.
Rainbow manzanita (*Arctostaphylos rainbowensis*)	--/-- CRPR 1B.1 County List A	December - March	Very low. Southern mixed chaparral is preferred habitat. Very little suitable habitat on site; species would likely have been observed if present.
San Diego sagewort (*Artemisia palmeri*)	--/-- CRPR 4.2 County List D	February - September	Moderate. Stream courses, often within coastal sage scrub and southern mixed chaparral
Encinitas baccharis (*Baccharis vanessae*)	FT/SE CRPR 1B.1 County List A	August - November	Low/Moderate. Occurs in southern maritime and southern mixed chaparrals.
San Diego goldenstar (*Bloomeria clevelandii*)	--/-- CRPR 1B.1 County List A	April - May	Low. Occurs in valley grasslands, particularly near mima mound topography or in the vicinity of vernal pools. Also on clay soils on dry mesas and hillsides in coastal sage scrub or chaparral. No clay soils or vernal pools on site.

Appendix C (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR
VALIANO PROJECT

SPECIES	LISTING OR SENSITIVITY	BLOOMING PERIOD	POTENTIAL TO OCCUR
Thread-leaved brodiaea (*Brodiaea filifolia*)	FT/SE CRPR 1B.1 County List A	March - June	Very low. Occurs in coastal sage scrub, cismontane woodlands, grassland, and vernal pools with clay soils. No clay soils or vernal pools on site.
Orcutt's brodiaea (*Brodiaea orcuttii*)	--/-- CRPR 1B.1 County List A	May – July	Very low. Occurs on clay soils in vernally moist grasslands, mima mound topography, and vernal pool peripheries. Occasionally will grow on streamside embankments. Clay soils not present on site.
Wart stemmed ceanothus (*Ceanothus verrucosus*)	--/-- CRPR 2.2 County List B	December - May	Moderate. Occurs in chaparral. Detectable at the time of the surveys. Species would have been observed if present.
Southern tarplant (*Centromadia parryi* ssp. *australis*)	--/-- CRPR 1B.1 County List A	May - November	Very low. Occurs in seasonally moist (saline) grasslands. Mesic areas in valley and foothill grasslands, alkaline locales, and peripheral salt marsh are utilized. Potential habitats not present on site.
Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	--/-- CRPR 1B.2 County List A	April - June	Moderate. Occurs in chaparral. Large shrub visible all year. Species would have been observed if present.
Variegated dudleya (*Dudleya variegata*)	--/-- CRPR 1B.2 County List A	April - June	Low/Moderate. Occurs in openings in sage scrub and chaparral, in isolated rocky substrates in open grasslands, and in proximity to vernal pools and mima mound topography.
Sticky dudleya (*Dudleya viscida*)	--/-- CRPR 1B.2 County List A	May - June	Very low. Grows predominantly on very steep north-facing slopes in shady, mesic conditions. Potential habitat not present on site. No dudleyas observed that could be this species.

Appendix C (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR
VALIANO PROJECT

SPECIES	LISTING OR SENSITIVITY	BLOOMING PERIOD	POTENTIAL TO OCCUR
Palmer's goldenbush (*Ericameria palmeri* ssp. *palmeri*)	--/-- CRPR 2.2 County List B	July – November	Low. Typically occurs in chaparral and along coastal drainages. No *Ericameria* shrubs observed.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE/SE CRPR 1B.1 County List A	April - June	Very low. Occurs in vernal pools or mima mound areas with vernally moist conditions that are not present on site.
San Diego barrel cactus (*Ferocactus viridescens*)	--/-- CRPR 2.1 County List B	May - June	Low. Optimal habitat for this cactus appears to be Diegan coastal sage scrub hillsides, often at the crest of slopes and growing among cobbles. Potential habitat limited on site. Succulent perennial visible all year.
Palmer's grapplinghook (*Harpagonella palmeri*)	--/-- CRPR 4.2 County List D	March - May	Very low. Occurs in chaparral, coastal sage scrub, and grasslands on clay soils. Clay soils not present on site.
San Diego marsh-elder (*Iva hayesiana*)	--/-- CRPR 2.2 County List B	April - October	Low. Occurs along stream courses. Shrub identifiable all year. Species would have been observed if present.
Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)	--/-- CRPR 1B.2 County List A	January – July	Low. 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. Potential habitat is limited on site.
Sea dahlia (*Leptosyne* [*Coreopsis*] *maritima*)	--/-- CRPR 2.2 County List B	March - May	None. Species range is west of this site.
Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)	--/-- CRPR 1B.2 County List A	June - August	Low. Typically occurs in the understory of mature stands of chamise in xeric situations. Very little suitable habitat on site and species was not observed.

Appendix C (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR
VALIANO PROJECT

SPECIES	LISTING OR SENSITIVITY	BLOOMING PERIOD	POTENTIAL TO OCCUR
Spreading navarretia (*Navarretia fossalis*)	FT/-- CRPR 1B.1 County List A	April - June	Very low. Occurs in vernal pools, playas, freshwater marshes, and chenopod scrub. No suitable habitat on site.
Engelmann oak (*Quercus engelmannii*)	--/-- CRPR 4.2 County List D	March - June	None. Tree species that would have been observed if present during site surveys.
Parry's tetracoccus (*Tetracoccus dioicus*)	--/-- CRPR 1B.2 County List A	April - May	Low. A robust shrub that occurs in chamise chaparral with a preference for Las Posas soils. Habitat conditions are typically quite xeric with only limited annual growth. Very little chaparral is present on site and only a small portion of the site contains Los Posas soils (extreme southeast corner). This area of the site is developed with equestrian facilities. Species would have been observed during surveys if present.

Appendix D

SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

Appendix D SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR VALIANO PROJECT		
SPECIES	**LISTING OR SENSITIVITY***	**POTENTIAL TO OCCUR**
INVERTEBRATES		
San Diego fairy shrimp (*Branchinecta sandiegonensis*)	FE/-- County Group 1	Very low. Occurs in seasonally astatic pools, which occur in tectonic swales or earth slump basins and other areas of shallow, standing water often in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral. No suitable habitat on site.
Hermes copper (*Lycaena hermes*)	Candidate/-- County Group 1	Very low. Occurs in southern mixed chaparral and coastal sage scrub with mature specimens of its larval host plant, spiny redberry (*Rhamnus crocea*). Spiny redberry is present on site, but the chaparral and sage scrub communities are patchy and limited in extent on site. The nearest and most recent observation of the species is from Elfin Forest in 2002, but that area was burned in 2007, and the status of the population is unknown (USFWS 2011). Two other nearby reported populations, San Marcos Creek/Questhaven Road and Lake Hodges, are both presumed extirpated (USFWS 2011).
VERTEBRATES		
Amphibians and Reptiles		
Arroyo toad (*Anaxyrus californicus*)	FE/SSC County Group 1	Very low. Found on banks with open-canopy riparian forest characterized by willows, cottonwoods, or sycamores; breeds in areas with shallow, slowly moving streams, but burrows in adjacent uplands during dry months. Potential habitat on site very limited or absent.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR
VALIANO PROJECT

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Amphibians and Reptiles (cont.)		
Orange-throated whiptail (*Aspidoscelis hyperythra*)	--/SSC County Group 2	Moderate to high. 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 areas, shaded areas, and abundant insect prey base, particularly termites (*Reticulitermes* sp.).
Coastal whiptail (*Aspidoscelis tigris stejnegeri*)	--/-- County Group 2	Moderate to high. Open coastal sage scrub, chaparral, and woodlands. Frequently found along the edges of dirt roads traversing its habitats. Important habitat components include open, sunny areas, shrub cover with accumulated leaf litter, and an abundance of insects, spiders, or scorpions.
Red-diamond rattlesnake (*Crotalus ruber*)	--/SSC County Group 2	Moderate. Found in chaparral, coastal sage scrub, along creek banks, particularly among rock outcrops or piles of debris with a supply of burrowing rodents for prey.
San Diego banded gecko (*Coleonyx variegatus abbotti*)	--/-- County Group 1	Very low. Chaparral and coastal sage scrub in areas with rock outcrops. Rock outcrops are not present on site.
San Diego ringneck snake (*Diadophis punctatus similis*)	--/-- County Group 2	Low to moderate. Generally occurs in moist habitats such as oak woodlands and canyon bottoms, but is also sometimes encountered in grassland, chaparral, and coastal sage scrub; generally restricted to leaf litter and rarely crosses open areas.
Western pond turtle (*Emys marmorata*)	--/SSC County Group 1	Low. Almost entirely aquatic; occurs in freshwater marshes, creeks, ponds, rivers and streams, particularly where basking sites, deep water retreats, and egg laying areas are readily available. Potential habitat is very limited on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR
VALIANO PROJECT

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Amphibians and Reptiles (cont.)		
Coastal rosy boa (*Charina* [*Lichanura*] *trivirgata* [*roseofusca*])	--/-- County Group 2	Moderate. Occurs among rocky outcrops in coastal sage scrub, chaparral, and desert scrub. A few rock outcrops are present on site, providing potentially suitable habitat.
Coast horned lizard (*Phrynosoma blainvillii*)	--/SSC County Group 2	Moderate. Occurs in coastal sage scrub, chaparral, open oak woodlands, and open coniferous forests. Important habitat components include basking sites, adequate scrub cover, areas of loose soil, and an abundance of harvester ants (*Pogonomyrmex* sp.), a primary prey item.
Coronado skink (*Plestiodon* [*Eumeces*] *skiltonianus interparietalis*)	--/SSC County Group 2	Moderate. Occurs in grasslands, coastal sage scrub, and open chaparral where there is abundant leaf litter or low herbaceous growth.
Coast patch-nosed snake (*Salvadora hexalepis virgultea*)	--/SSC County Group 2	Low to moderate. Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains (CaliforniaHerps.com 2012).
Western spadefoot (*Spea hammondii*)	--/SSC County Group 2	Low. Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; requires temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs (*Rana catesbiana*) or crayfish (*Procambarus* sp.).
California red-legged frog (*Rana* [*aurora*] *draytonii*)	FT/SSC County Group 1	Very low. Found in dense, shrubby riparian vegetation with deep, slow-moving water. Potential habitat not present on site.
Two-striped garter snake (*Thamnophis hammondii*)	---/SSC County Group 1	Moderate. Typical habitat is along permanent and intermittent streams bounded by dense riparian vegetation; also found associated with vernal pools and stock ponds.

Appendix D (cont.) **SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR** **VALIANO PROJECT**		
SPECIES	**LISTING OR SENSITIVITY***	**POTENTIAL TO OCCUR**
VERTEBRATES (cont.)		
Birds		
Cooper's hawk (*Accipiter cooperii*)	--/WL County Group 1	Present. Tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as scrublands or fields. One individual observed on multiple days in riparian forest and oak woodland habitats in the northeastern portion of the site.
Sharp-shinned hawk (*Accipiter striatus*)	--/WL County Group 1	Low. Usually observed in areas with tall trees or other vegetative cover but can be observed in a variety of habitats. In San Diego County occurs in small numbers and only in winter.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	--/WL County Group 1	Low. Occurs in coastal sage scrub on rocky hillsides and in canyons; also found in open sage scrub/grassy areas of successional growth. Potential habitat on site is patchy and limited in extent.
Grasshopper sparrow (*Ammodramus savannarum*)	--/SSC County Group 1	Present. Typical habitat is dense grasslands that have little or no shrub cover. One individual detected in grassland on site.
Bell's sage sparrow (*Amphispiza belli belli*)	--/WL County Group 1	Very low. Occurs in sunny, dry stands of coastal sage scrub or chaparral. Potential habitat on site is patchy and limited in extent.
Golden eagle (*Aquila chrysaetos*)	BCC, BGEPA/ WL, Fully Protected County Group 1	Low. Typical foraging habitat includes grassy and open, shrubby habitats. Generally nests on remote cliffs; requires areas of solitude at a distance from human habitation. Potential foraging habitat occurs on site but has limited value due to the current levels of habitat fragmentation.

Appendix D (cont.) **SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR** **VALIANO PROJECT**		
SPECIES	**LISTING OR SENSITIVITY***	**POTENTIAL TO OCCUR**
VERTEBRATES (cont.)		
Birds (cont.)		
Long-eared owl (*Asio otus*)	--/SSC County Group 1	Low. In San Diego County is a rare resident in shady oak woodlands and broad riparian forests. Ideal habitat includes a closed canopy near open habitats for foraging and a supply of abandoned raptor or corvid nests or debris platforms for nesting (Unitt 2004).
Burrowing owl (*Athene cunicularia*)	BCC/SSC County Group 1	Very low. Typical habitat is grasslands, open scrublands, agricultural fields, and other areas where there are ground squirrel burrows or other areas in which to burrow. All records of burrowing owl in northwestern San Diego County are prior to 1997 (Unitt 2004).
Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegonensis*)	BCC/SSC County Group 1	Very low. Occurs in coastal sage scrub with large cacti for nesting. No suitable habitat occurs on site.
Turkey vulture (*Cathartes aura*)	--/-- County Group 1	Present. Species occurs throughout much of San Diego County with the exception of extreme coastal San Diego where development is heaviest. Foraging habitat includes most open habitats with breeding occurring in crevices among boulders. Species observed soaring over the site.
Northern harrier (*Circus cyaneus*)	--/SSC County Group 1	Present. Within San Diego County, distribution is primarily scattered throughout lowlands but can also be observed in foothills, mountains, and desert. Typical habitat consists of open grassland and marsh. At least two individuals (male and female) were observed foraging over grassland in the east-central portion of the site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR
VALIANO PROJECT

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Birds (cont.)		
Yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	Candidate, BCC/ SE County Group 1	Very low. Generally occurs along larger river systems, where it nests in riparian forest dominated by willows and cottonwoods.
Yellow warbler (*Setophaga brewsteri*)	--/SSC County Group 2	Present. Species observed in riparian forest habitat on site.
Southwestern willow flycatcher (*Empidonax trailii extimus*)	FE/SE County Group 1	Very low. Breeds within thickets of willows or other riparian understory usually along streams, ponds, lakes, or canyons. One of the most important characteristics of the habitat appears to be the presence of dense vegetation, usually throughout all vegetation layers present. Almost all breeding habitats are within close proximity of water or very saturated soil. Very little potential habitat is present on site and is unlikely to support this species.
California horned lark (*Eremophila alpestris actia*)	--/WL County Group 2	High. Found on sandy beaches and in agricultural fields, grassland, and open areas.
Prairie falcon (*Falco mexicanus*)	BCC/WL County Group 1	Observed. Nests on cliffs or bluffs and forages over open desert scrub or grassland. Potential foraging habitat, only, occurs on site. One individual was observed perching on a fence post in the southern portion of the site on a single survey day.
Yellow-breasted chat (*Ictera virens*)	--/SSC County Group 1	Low to moderate. Prefers mature riparian woodlands.
Loggerhead shrike (*Lanius ludovicianus*)	BCC/SSC County Group 1	Low to moderate. Typical habitat includes open habitats including grasslands, shrublands, and ruderal areas with adequate perching locations.
White-faced ibis (*Plegadus chihi*)	--/WL County Group 1	Very low. Occurs in large marshes, with nesting colony hidden in inaccessible reedbed or willow-covered area. Potential habitat absent from the site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR
VALIANO PROJECT

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Birds (cont.)		
Coastal California gnatcatcher (*Polioptila californica californica*)	FT/SSC County Group 1	Low. Occurs in coastal sage scrub and very open chaparral. Potential habitat on site is very patchy and limited in extent. Protocol surveys conducted in 2013 were negative.
Least Bell's vireo (*Vireo bellii pusillus*)	FE/SE County Group 1	Low. Inhabits riparian woodland and is most frequent in areas that combine an understory of dense, young willows or mule fat with a canopy of tall willows. Potential habitat on site is very limited. Protocol surveys conducted in 2013 were negative.
Mammals		
Pallid bat (*Antrozous pallidus*)	--/SSC County Group 2	Low to moderate. Locally common species of low elevations in California. Prefers rocky outcrops, cliffs, and crevices with open habitats for foraging.
Ringtail (*Bassariscus astutus*)	--/-- County Group 2	Low. Found in a mixture of shrubland and forest habitats at low to middle elevations in close association with rocky areas and riparian habitats. Potential habitat on site is limited.
Dulzura pocket mouse (*Chaetodipus californicus femoralis*)	--/SSC County Group 2	Low. Primarily associated with mature chaparral. It has, however, been trapped in mule fat scrub and is known to occur in coastal sage scrub. Potential habitat on site is limited in extent.
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	--/SSC County Group 2	Moderate. Occurs in open areas of coastal sage scrub and weedy growth, often on sandy substrates that are present on site.
Stephens' kangaroo rat (*Dipodomys stephensi*)	FE/ST County Group 1	Low. Species range includes San Jacinto Valley and adjacent areas of western Riverside County as well as San Bernardino and northwestern San Diego counties. Habitat includes sparsely vegetated habitats of sagebrush or annual grasses. Species has not been found in the Project vicinity.

Appendix D (cont.) **SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR** **VALIANO PROJECT**		
SPECIES	**LISTING OR SENSITIVITY***	**POTENTIAL TO OCCUR**
VERTEBRATES (cont.)		
Mammals (cont.)		
Spotted bat (*Euderma maculatum*)	--/SSC County Group 2	Very low. Prefers sites with adequate roosting habitat (i.e., cliffs); feeds over water and along washes. Rare in California (Zeiner, et al. 1990).
Western mastiff bat (*Eumops perotis californicus*)	--/SSC County Group 2	Low to moderate. Suitable habitat consists of extensive open areas with abundant roost locations (crevices in cliff faces, high buildings, trees, tunnels).
Mountain lion (*Felis concolor*)	--/-- County Group 2	Low. Requires extensive areas of riparian vegetation and brushy stages of various habitats with interspersed irregular terrain, rocky outcrops, and tree/brush edges. Main prey is mule deer, which was observed on site.
Western yellow bat (*Lasiurus xanthinus*)	--/SSC --	Very low. Found in wooded areas and desert scrub, particularly in palm trees. Rare visitor to San Diego County (Bats of San Diego County 2012).
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	--/SSC County Group 2	High. Found primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present.
California leaf-nosed bat (*Macrotus californicus)*	--/SSC County Group 2	Very low. Prefers rocky, rugged terrain; roosts by day in caves, abandoned mines, and tunnels. Forages over nearby flats and washes. Potential habitat not present on site.
Small-footed myotis (*Myotis ciliolabrum*)	--/-- County Group 2	Low to moderate. Occurs in arid, upland habitats. Prefers open stands in forests and woodlands as well as brushy habitats. Feeds over and drinks from streams, ponds, springs, and stock tanks.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR
VALIANO PROJECT

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Mammals (cont.)		
Long-eared myotis (*Myotis evotis*)	--/-- County Group 2	Low. Found in brush, woodland, and forest habitats, but coniferous woodlands and forests seem to be preferred. Roosts in rock crevices, buildings, under bark, and in snags. Feeds along habitat edges, in open habitat, and over water.
Fringed myotis (*Myotis thysanodes*)	--/-- County Group 2	Low. Occurs in a wide variety of habitats, but optimal habitats are oak and juniper forests and desert scrub. Roosts in caves, mines, buildings, and crevices. Forages in open habitats, streams, lakes, and ponds; requires water.
Long-legged myotis (*Myotis volans*)	--/-- County Group 2	Moderate. Feeds over water and over open habitats using denser woodland and forests for reproduction. Drinks regularly. Roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves.
Yuma myotis (*Myotis yumanensis*)	--/-- County Group 2	Moderate. Open forests and woodland are optimal habitat. Closely tied to bodies of water for foraging and drinking. Roosts in buildings, mines, crevices, caves, and under bridges.
San Diego desert woodrat (*Neotoma lepida intermedia*)	--/SSC County Group 2	Moderate. Occurs in open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca.
Pocketed free-tailed bat (*Nyctinomops femorosaccus*)	--/SSC County Group 2	Very low. Prefers desert habitats with high cliffs or rock outcrops. Suitable habitat not present on site.
Big free-tailed bat (*Nyctinomops macrotis*)	--/SSC County Group 2	Very low. A rare species in California (Zeiner et al. 1990). Prefers rugged, rocky canyons. Often forages over water. Roosts in crevices in high cliffs or rock outcrops not present on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR
VALIANO PROJECT

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Mammals (cont.)		
Southern grasshopper mouse (*Onychomys torridus ramona*)	--/SSC County Group 2	Low. Desert habitat is preferred, but it also occurs in coastal scrub and mixed chaparral. It is uncommon in valley foothill and montane riparian habitats.
Townsend's western big-eared bat (*Corynorhinus townsendii*)	--/SSC County Group 2	Low. Most abundant in mesic habitats. Considered uncommon in California (Zeiner, et al. 1990). Drinks water and requires caves, mines, tunnels, buildings, or other man-made structures for roosting.
American badger (*Taxidea taxus*)	--/SSC County Group 2	Low. Uncommon resident in California that occurs in herbaceous, shrub, and open stages of most habitats with dry, friable soils (Zeiner et al. 1990).

Appendix E

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

Appendix E
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
BCC	Birds of Conservation Concern (discussed in more detail, below)
BGEPA	Bald and Golden Eagle Protection Act (discussed in more detail below)

California Department of Fish and Wildlife (CDFW)

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 refer 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 CDFW.

County of San Diego

Plant sensitivity:

Group A	Plants rare, threatened, or endangered in California or elsewhere
Group B	Plants rare, threatened, or endangered in California but more common elsewhere
Group C	Plants that may be quite rare, but more information is needed to determine rarity status
Group D	Plants of limited distribution and are uncommon, but not presently rare or endangered

Animal sensitivity:

County Sensitive	Animals considered under California Environmental Quality Act (CEQA) review of projects.

Multiple Species Conservation Program (MSCP) Covered

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

MSCP Narrow Endemic (NE)

Narrow endemic species are native species that have "restricted geographic distributions, soil affinities, and/or habitats." The MSCP participants' subarea plans have specific conservation measures to ensure impacts to narrow endemics are avoided to the maximum extent practicable.

OTHER CODES AND ABBREVIATIONS

USFWS Bald and Golden Eagle Protection Act (BGEPA)

In 1782, Continental Congress adopted the bald eagle as a national symbol. During the next one and a half centuries, the bald eagle was heavily hunted by sportsmen, taxidermists, fisherman, and farmers. To prevent the species from becoming extinct, Congress passed the Bald Eagle Protection Act in 1940. The Act was extremely comprehensive, prohibiting the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import of the bald eagle "at any time or in any manner."

In 1962, Congress amended the Eagle Act to cover golden eagles, a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. The golden eagle, however, is accorded somewhat lighter protection under the Act than the bald eagle. Another 1962 amendment authorizes the Secretary of the Interior to grant permits to Native Americans for traditional religious use of eagles and eagle parts and feathers.

USFWS Birds of Conservation Concern (BCC)

This report from 2002 aims to identify accurately the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' highest conservation priorities and draw attention to species in need of conservation action. USFWS hopes that by focusing attention on these highest priority species, the report will promote greater study and protection of the habitats and ecological communities upon which these species depend, thereby ensuring the future of healthy avian populations and communities. The report is available online at http://migratorybirds.fws.gov/reports/bcc2002.pdf.

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

OTHER CODES AND ABBREVIATIONS (cont.)

California Rare Plant Rank (CRPR) 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.

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Appendix F

RESULTS OF A FOCUSED SURVEY FOR THE LEAST BELL'S VIREO AND COASTAL CALIFORNIA GNATCATCHER (KONECNY BIOLOGICAL SERVICES)

Konecny Biological Services
Biological Consulting, Research, Conservation

August 23, 2013

Helix Environmental Planning, Inc.
7578 El Cajon Blvd., Suite 200
La Mesa, CA 91942

Attn: Dr. Steve Neudecker

Re: Results of a Focused Survey for the Least Bell's Vireo and Coastal California Gnatcatcher at the Valiano Property Site, San Diego County, California, 2013.

Dear Dr. Neudecker:

This letter report presents the results of focused surveys for the least Bell's vireo (*Vireo bellii pusillus*) (LBV) and coastal California gnatcatcher (*Polioptilla californica californica*) (CAGN) at the Valiano property site in San Diego County, California. The LBV is listed as an endangered species by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW). The CAGN is listed as a threatened species by the USFWS. The CDFW considers the CAGN to be a California Species of Special Concern (CSSC).

Surveys for the LBV were conducted following methodology approved by the USFWS (2001). Surveys for the gnatcatcher were conducted following protocol approved by the USFWS (USFWS 1997), for jurisdictions participating in the Natural Communities Conservation Program (NCCP) and the Endangered Species Act section 4(d) process. The surveys were conducted by wildlife biologist John Konecny, and authorized by USFWS section 10(a) permit number TE837308-5, and a CDFG Memorandum of Understanding (MOU). No LBV or CAGN were detected at the Valiano site in 2013.

INTRODUCTION

The LBV is a small greenish-gray songbird with a white underbelly, two white wingbars, and white spectacles across the lores. The LBV was once widespread throughout the Central Valley and other low elevation river valleys of California. Historically, the LBVs breeding range extended from the interior of northern California to northwestern Baja California. The LBV typically prefers riparian areas dominated by willows (*Salix* sp.) of mixed age composition. These areas frequently include other trees such as western cottonwood (*Populus freemontii*) and California sycamore (*Platanus racemosa*), with a dense understory of young willows, mule-fat (*Baccharis salicifolia*), California primrose (*Rosa californica*), and a variety of other shrubby species.

Loss and degradation of breeding habitat has been the greatest contributor to the decline of the LBV in California. Habitat conversion for agricultural purposes has removed much of the original riparian woodland, and flood control measures and channelization have further depleted the riparian habitats used by the LBV as well as other riparian birds. The significant reduction in the population size and range of the LBV resulted in it being listed as a state endangered species in June 1980, and federally listed as endangered in May 1986 (USFWS 1986).

The CAGN is a small gray songbird that is an obligate resident of coastal sage scrub (CSS) dominated plant communities. Its range occurs from approximately 30 degrees north latitude in Baja California, Mexico, northward to southern Ventura County in southern California, and includes the Counties of San

Diego, Riverside, Orange, Los Angeles, Ventura, and San Bernardino (Atwood 1992). United States populations of the CAGN have undergone decline due to the loss and fragmentation of CSS habitat resulting from urban development and agricultural activities.

CAGNs usually begin to molt into breeding plumage in early February (Grishaver *et al* 1998). Males select the site for nesting, and nest building begins two to four weeks after the molt. The nest is constructed primarily by the male, and takes between four and eleven days to complete. If there is persistent predation, up to ten nests can be constructed. Eggs are incubated for twelve days, and nestlings fledge at 13 days. Young remain with their parents for three to five weeks after fledging.

CSS is composed of relatively low growing, dry season deciduous, and succulent plants. Diegan CSS is a wide spread coastal sage scrub of southern California from Los Angeles to Baja California, Mexico (Holland 1986). Diegan CSS is dominated by California sagebrush (*Artemisia californica*) and flat-top buckwheat (*Eriogonum fasciculatum*). Other characteristic species include white sage (*Salvia apiana*), laurel sumac (*Malosma laurina*), California encelia (*Encelia californica*), black sage (*Salvia melifera*), lemonadeberry (*Rhus integrifolia*), and deerweed (*Lotus scoparius*).

PROJECT LOCATION

The Valiano site is located immediately west of the City of Escondido, north of the Community of Harmony Grove, and south of the City of San Marcos in north-central San Diego County (Figure 1). The Valiano site is in a configuration of two polygons. The southern polygon, being squarish is bordered on the east side by Country Club Drive and on the north by Mount Whitney Road. The northern polygon is bordered on its south side by Mount Whitney Road and on the east by the western perimeter of section 19 of the Ranch Santa Fe quadrangle map. Specifically, the Valiano site is located within Township 12 South, Range 2 West, and Section 19 of the Rancho Santa Fe, CA. 7.5-minute quadrangle map.

PROJECT SITE DESCRIPTION

The Valiano site is a mosaic of habitat types typical of inland north-central San Diego County. The western half of the northern polygon is predominantly citrus and avocado orchard and nonnative grasslands, characterized by slender oat (*Avena barbata*), rip-gut grass (*Bromus diandrus*), black mustard (*Brassica nigra*), and sweet fennel (*Foeniculum vulgare*). A thin strip of southern riparian forest runs east to west across the northern half. This area is characterized by arroyo willow (*Salix lasiolepis*), red willow (*S.laevigata*), and coast live oak (*Quercus agrifolia*).

Diegan CSS is present on the Valiano site in three disjuct areas. The largest of the three is present on the north side of the southern riparian forest in the northern polygon. It is characterized California sagebrush and flat-top buckwheat. The other two patches of Diegan CSS are located in the southern polygon and are very small. One is located on the east side of the site adjacent to County Club Lane, and the other is located inside of the Harmony Grove Equestrian Center on the south end of the site.

The entire eastern border of the Valiano site is a residential community. The elevation of the Valiano site is approximately 670-feet (204-meters) to 900-feet (274 meters) above mean sea level.

METHODS

Helix Environmental conducted the first LBV survey on May 9, 2013. Konecny Biological Services conducted seven LBV surveys between May 19th and July 21st, 2013. Three surveys for the CAGN were conducted concurrently with those for the LBV, beginning on June 8th, 2013. A summary of the environmental conditions on the seven survey dates is provided in Table 1 below.

Table 1. Summary of Weather Conditions During Seven Surveys for the Least Bell's Vireo, that Included Three Surveys for the Coastal California Gnatcatcher at the Valiano Site, San Diego County, California, 2013.

Survey #	Date	Surveyor (Species)*	Time	Weather Conditions
1	05/19/2013	JK (LBV)	0630-1000	100% overcast, 59-65°F, wind 3-5 mph
2	05/29/2013	JK (LBV)	0620-0940	100% overcast, 561-65°F, wind 3-5 mph
3	06/08/2013	JK, (LBV)(CAGN)	0620-1150	50% overcast, 60-73°F, wind 3-5 mph
4	06/23/2013	JK (LBV)(CAGN)	0620-1120	10% overcast, 59-67°F, wind 1-3 mph
5	06/30/2013	JK (LBV)	0615-0920	10% overcast, 60-68°F, wind 3-5 mph
6	07/07/2013	JK (LBV)	0625-0935	100% overcast, 63-74°F, wind 3-5 mph
7	07/21/2013	JK (LBV)(CAGN)	0600-1100	100% overcast, 64-74°F, wind 5-7 mph

* JK-John Konecny; LBV-Least Bell's Vireo; CAGN-Coastal California Gnatcatcher

The LBV surveys were conducted by slowly walking through appropriate southern riparian forest habitat and listening for LBV. LBV surveys were conducted passively, without the use of a call prompt. A response was listened for before proceeding to the next portion of habitat in the survey area.

CAGN surveys were conducted by walking around the perimeter of each of the three Diegan CSS polygons and listenening and watching for CAGN. If CAGNs were not detected passively, a digital vocalization (call-prompt) of the species "mew" call was played for approximately 15-seconds with an MP3 player and amplified speakers. A response was listened for in the next two-minute interval. If CAGN were not detected, this procedure was repeated once again before proceeding to the next polygon. LBV and CAGN surveys were typically initiated between 0600 and 0700, and lasted approximately four hours.

RESULTS AND DISCUSSION

No LBV or CAGN were detected at the Valiano site during the 2013 surveys. The southern riparian forest on the site is a tenuous strip of willows and coast live oaks with little to no understory. The area may have been grazed by cattle at one time that removed most of the understory. In its present condition, the southern riparian forest is of a very low quality for the LBV. The three patches of Diegan CSS are very isolated and small. The species composition is that which is preferred by the CAGN, but the small size and isolation makes it low quality CAGN habitat.

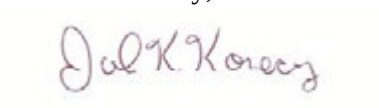
One CDFW CSSC, the northern harrier (*Circus cyaneus*) was detected foraging across the northern portion of the site. Northern harriers were detected three different times in this area. Both male and female were detected. Three other species considered sensitive by San Diego County were detected on the site. A single prairie falcon (*Falco mexicanus*) was observed perched on a fence post at the equestrian center on the south end of the site. A Cooper's hawk (*Accipiter cooperii*) was detected in the southern riparian forest in the north end of the site on each of the seven survey events. This species is likely a resident at that location. A red-shouldered hawk (*Buteo lineatus*) was detected in the oak woodland, north of the southern riparian forest.

No other federal or state listed endangered or threatened species or other CDFW CSSC were detected on the site. A total of eleven species of mammals, 50 species of birds, and three reptile species were detected during the course of the surveys (Table 2). The mammals, birds, and reptiles detected on and around the site are typical of those inhabiting San Diego County in May, June, and July.

CERTIFICATION

I certify that the information in this survey report and attached exhibits fully and accurately represent my work. The results of focused surveys for listed species are typically considered valid for one year by the USFWS and CDFG. If you have any questions or require additional information, please call me at (760) 489-5276.

Sincerely,



John K. Konecny
Wildlife Biologist
TE-837308-5

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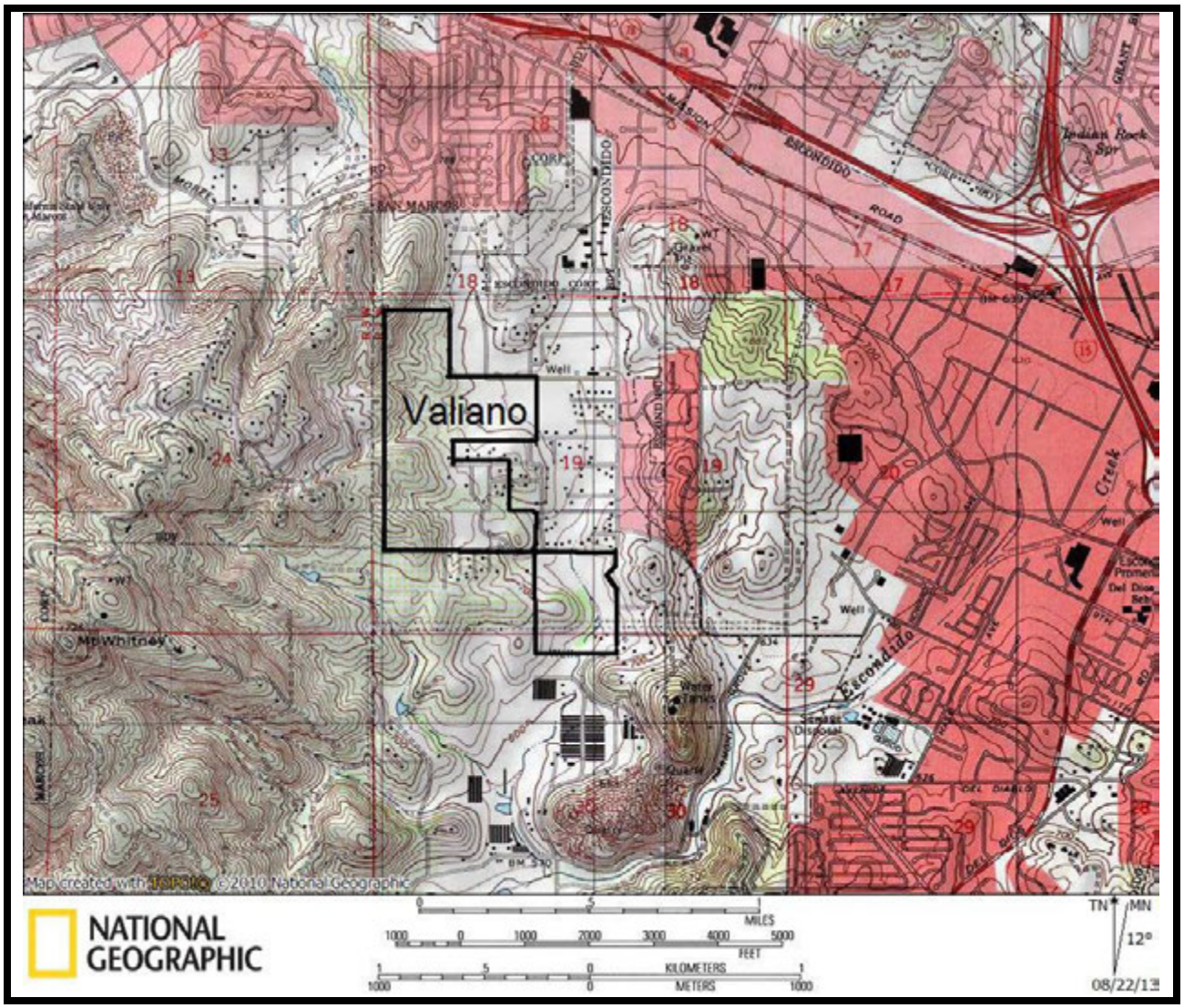


Figure 1. Location of the Valiano Project Site (shown in black line), San Diego County, California, 2013.

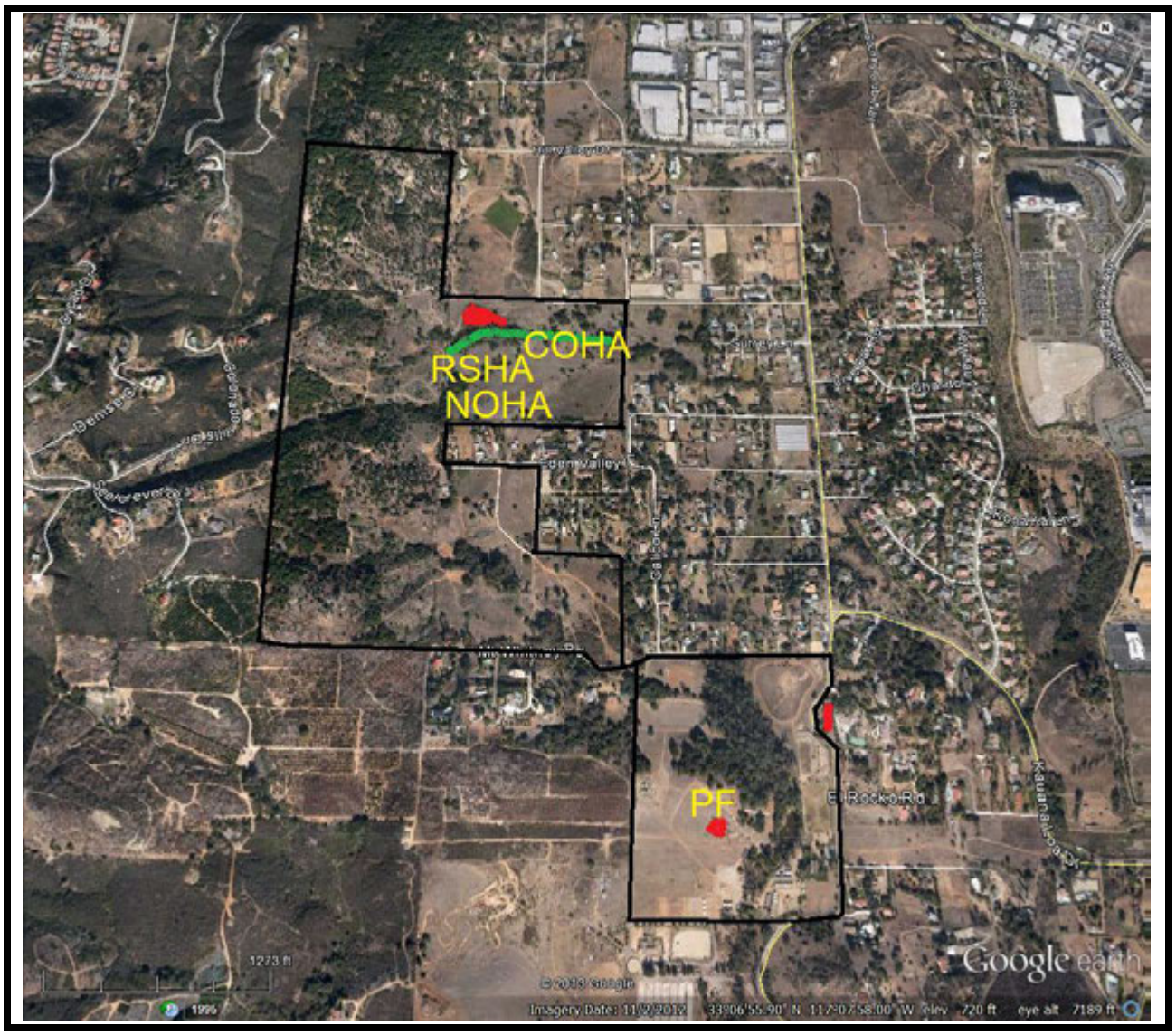


Figure 2. Location of the Least Bell's Vireo Survey Area (green) and Coastal California Gnatcatcher Survey Area (red); and Location of the Prairie Falcon (yellow PF), Cooper's Hawk (yellow COHA), Red-shouldered Hawk (yellow RSHA), and Northern Harrier (yellow NOHA) Detections at the Valiano Project Site, San Diego County, California, 2013.

Table 2. Animal Species Detected During Surveys of Riparian and Coastal Sage Scrub Habitat on the Valiano Site, San Diego County, 2013.

Class Mammalia	
Family Cervidae	
Mule Deer	*Odocoileus hemionus*
Family Canidae	
Coyote	*Canis latrans*
Domestic Dog	*Canis domesticus*
Family Felidae	
Bobcat	*Felis rufus*
Family Procyonidae	
Raccoon	*Procyon lotor*
Family Mustelidae	
Striped Skunk	*Mephitis mephitis*
Family Sciuridae	
Beechy Ground Squirrel	*Spermophilus beecheyi*
Family Leporidae	
Audubon's Cottontail	*Sylvilagus auduboni*
Family Geomyidae	
Botta Pocket Gopher	*Thomomys bottae*
Family Cricetidae	
Big-eared Woodrat	*Neotoma macrotis*
Family Heteromyidae	
Kangaroo Rat	*Dipodomys* sp.
Class Aves	
Family Phasianidae	
California Quail	*Callipepla californica*
Family Catharidae	
Turkey Vulture	*Cathartes aura*
FamilyAccipitridae	
Red-tailed Hawk	*Buteo jamaicensis*
Cooper's Hawk	*Accipiter cooperii*
Red-shouldered Hawk	*Buteo lineatus*
Northern Harrier	*Circus cyaneus*

Family Falconidae	
American Kestrel	*Falco sparverius*
Praire Falcon	*Falco mexicanus*
Family Columbidae	
Mourning Dove	*Zenaida macroura*
Common Ground Dove	*Columbina passerine*
Rock Pigeon	*Columba livia*
Family Cuculidae	
Greater Roadrunner	*Geococcyx californianus*
Family Apodidae	
White-throated Swift	*Aeronautes saxatalis*
Family Trochilidae	
Anna's Hummingbird	*Calypte anna*
Costa's Hummingbird	*Calypte costae*
Family Picidae	
Nuttall's Woodpecker	*Picoides nuttallii*
Northern Flicker	*Colaptes auratus*
Family Tyrannidae	
Western Wood Pewee	*Contopus sordidulus*
Ash-throated Flycatcher	*Myriarchus cinerascens*
Black Phoebe	*Sayornis nigricans*
Cassin's Kingbird	*Tyrannus vociferus*
Family Vireonidae	
Warbling Vireo	*Vireo gilvus*
Family Corvidae	
Western Scrub Jay	*Aphelocoma coerulescen*
Common Raven	*Corvus corax*
American Crow	*Corvus brachyrhynchos*
Family Hirundinidae	
Northern Rough-winged Swal	*Stelgidopteryx serripennis*
Cliff Swallow	*Petrochelidon pyrrhonota*
Family Paridae	
Oak Titmouse	*Baeolophus inornatus*
Family Aegithalidae	
Bushtit	*Psaltiparus minimus*
Family Timaliidae	
Wrentit	*Chamaea fasciata*

Family Troglodytidae
- Bewick's Wren *Thryomanes bewickii*
- House Wren *Troglodytes aedon*

Family Sturnidae
- European Starling *Sturnus vulgaris*

Family Turdidae
- Western Bluebird *Sialia mexicanus*

Family Mimidae
- Northern Mockingbird *Mimus polyglottos*

Family Parulidae
- Common Yellowthroat *Geothlypis trichas*
- Orange-crowned Warbler *Vermivora celata*

Family Emberizidae
- Spotted Towhee *Pipilo maculates*
- California Towhee *Pipilo crassalis*
- Song Sparrow *Melospiza melodia*
- Lark Sparrow *Chondestes grammacus*

Family Cardinalidae
- Black-headed Grosbeak *Pheucticus melanocephalus*
- Blue Grosbeak *Passerina caerulea*

Family Icteridae
- Brewer's Blackbird *Euphagus cyanocephalus*
- Brown-headed Cowbird *Molothrus ater*
- Bullock's Oriole *Icterus bullockii*
- Western Meadowlark *Sturnella neglecta*

Family Fringillidae
- Lesser Goldfinch *Carduelis psaltria*
- House Finch *Carpodacus mexicanus*

Class Reptilia

Family Lampropelidae
- California Kingsnake *Lampropeltis getula*

Family Colubridae
- Gopher Snake *Pituophis catenifer*

Family Iguanidae
- Western Fence Lizard *Sceloporus occidentalis*

Appendix G

DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 17 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 1

Investigator(s): W.L. Sward and E. Harris Section, Township, Range: S 18, T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): none Slope (%): 2-3%

Subregion (LRR): C Lat: 33°07'43.76"N Long: 117°08'15.15"E Datum:

Soil Map Unit Name: Vista coarse sandy loam, 5-9% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sample point located in a drainage next to La Moree Road. CORPS, CDFG and RPO jurisdictional.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' X 60')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	30	Yes	FACW
2.			
3.			
4.			
	30%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30'X40')			
1. Salix lasiolepis	70	Yes	FACW
2. Washingtonia robusta	20	Yes	FACW
3.			
4.			
5.			
	90%	= Total Cover	
Herb Stratum (Plot size: r=5')			
1. Nasturtium officinale	6	No	OBL
2. Typha domingensis	30	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	36%	= Total Cover	
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0%	= Total Cover	

% Bare Ground in Herb Stratum 50% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Disturbed southern willow scrub.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR2/1	100%					SiC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ✔ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ No ___

Remarks:

Sediment over rip-rap; refusal at 8". Soil likely recently deposited and may not have had time to develop hydric soil indicators. Sample Point regarded as problem area for soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✔ No ___ Depth (inches): >1 in

Water Table Present? Yes ✔ No ___ Depth (inches): 2 in

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 0 in

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Rained heavily 2 days ago (15 Feb 2012).
FAC-neutral Test: w:u = 4:0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 17 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 2

Investigator(s): W.L. Sward and E. Harris Section, Township, Range: S 18, T 12S, R 2W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5-7%

Subregion (LRR): C Lat: 33°07'43.05"N Long: 117°08'15.53"E Datum:

Soil Map Unit Name: Vista coarse sandy loam, 9-15% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland. Sample point located on slope above drainage.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=20')			
1. Baccharis pilularis	2	No	UPL
2.			
3.			
4.			
5.			
	2% = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Sisyrinchium bellum	2	No	FACW
2. Medicago polymorpha	5	No	UPL
3. Geranium carolinianum	50	Yes	UPL
4. Helminthotheca echioides	+	No	FACU
5. Avena barbata	+	No	UPL
6. Festuca myuros	20	Yes	UPL
7. Ambrosia psilostachya	2	No	FACU
8. Convolvulus arvensis	+	No	UPL
	79% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 20% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0%	x 1 = 0
FACW species 2%	x 2 = 4
FAC species 0%	x 3 = 0
FACU species 2%	x 4 = 8
UPL species 77%	x 5 = 385
Column Totals: 81% (A)	397 (B)

Prevalence Index = B/A = 4.9

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Non-native grassland

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR3/2	100%					SaCL	
6-16	2.5Y4.5/3	99%	10YR5/8	<1%			SaC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators
FAC-neutral Test: w:u = 0:2

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 17 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 3

Investigator(s): W.L. Sward and E. Harris Section, Township, Range: S 18, T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): none Slope (%): 2-3%

Subregion (LRR): C Lat: 33°07'41.91"N Long: 117°08'14.68"E Datum:

Soil Map Unit Name: Vista coarse sandy loam, 9-15% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ✔	No ____	

Remarks:

Corps non-wetland WUS. CDFG jurisdictional and County RPO wetland.
Sample point located off site.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 18' X 60')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	40	Yes	FACW
2.			
3.			
4.			
	40% = Total Cover		
Sapling/Shrub Stratum (Plot size: 18' X 40')			
1. Salix lasiolepis	60	Yes	FACW
2.			
3.			
4.			
5.			
	60% = Total Cover		
Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0% = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 80% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

Southern willow scrub

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR2/2	100%					SaCL	
7-18	10YR3/2	100%					SaL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes ✔ No _____ Depth (inches): 10"

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): 3"

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology present.
FAC-neutral Test: w:u = 2:0
Heavy rain 2 days prior to today.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 29 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 4

Investigator(s): W.L. Sward and T. Baxter Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1%

Subregion (LRR): C Lat: 33°06'50.31"N Long: 117°08'03.42"E Datum:

Soil Map Unit Name: Vista coarse sandy loam, 5-9% slopes NWI classification: PFOA

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sample Point located in a small (12'X12') excavated basin. It is in a low area but not associated with a drainage or OHWM. CDFG, Corps, and RPO jurisdictional habitat.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 12'X12')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 12'X12')			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size: 5'X5')			
1. Typha domingensis	50%	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	50%	= Total Cover	
Woody Vine Stratum (Plot size: 12'X12')			
1.			
2.			
	0%	= Total Cover	

% Bare Ground in Herb Stratum 20% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Freshwater marsh

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

No pit dug. Hydric soil presumed based on strong wetland vegetation and hydrology indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✔ No _____ Depth (inches): 3"

Water Table Present? Yes ✔ No _____ Depth (inches): +3"

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): 0"

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology present
FAC-neutral Test: w:u = 1:0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 29 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 5

Investigator(s): W.L. Sward and T. Baxter Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): none Slope (%): 4-5%

Subregion (LRR): C Lat: Long: Datum:

Soil Map Unit Name: Vista coarse sandy loam, 5-9% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No	**Is the Sampled Area within a Wetland?** Yes No ✔
Hydric Soil Present?	Yes	No ✔	
Wetland Hydrology Present?	Yes ✔	No	

Remarks:

Upland. Wetland vegetation present but independent of any wetland landscape position.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25'X40')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=15')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Distichlis spicata	90	Yes	FAC
2. Juncus mexicanus	3	No	FACW
3. Avena barbata	+	No	UPL
4.			
5.			
6.			
7.			
8.			
	93% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

Prevalence Index is ≤3.0[1]

Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No

Remarks:

Meets dominance test but only with a FAC species.
Grassland

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR3/3	100%					SiL	
6-15	10YR3/2	70%	5YR3/4	30%			L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

No hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-neutral Test: w:u = 0:0

C3 thought to remnant from when agricultural pond existed and water seeped downhill to this location.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 29 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 6

Investigator(s): W.L. Sward and T. Baxter Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5-7%

Subregion (LRR): C Lat: 33.112659° Long: -117.134307° Datum: WGS84

Soil Map Unit Name: Vista coarse sandy loam, 5-9% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

Sample point located on hillslope outside of any drainage.
Corps and CDFG jurisdictional, and RPO wetland, although hydrology likely due to grove irrigation in watershed to the west.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' X 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=15')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Juncus mexicanus	60	Yes	FACW
2. Euthamia occidentalis	10	No	FACW
3. Distichlis spicata	30	Yes	FAC
4.			
5.			
6.			
7.			
8.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Herbaceous wetland.

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR2/2	95%	7.5YR4/6	5%	C	M	L	
3-7	10YR 3/2	85%	7.5YR3/4	15%	C	M	SaCL	
7-16	2.5Y5/2	98%	7.5YR4/4	2%	C	M	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology likely due to seepage from grove irrigation: No seeps shown on USGS maps for area.
FAC-neutral Test: w:u = 1:0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 29 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 7

Investigator(s): W.L. Sward and T. Baxter Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): None Slope (%): 3-4%

Subregion (LRR): C Lat: 33°06'50.21"N Long: 117°08'04.35"E Datum:

Soil Map Unit Name: Vista coarse sandy loam, 5-9% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes ____	No ✔	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ____	No ✔	

Remarks:

Upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=15')			
1. Baccharis pilularis	2	Yes	UPL
2. Isocoma menziesii	3	Yes	FAC
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: r=5')			
1. Distichlis spicata	60	Yes	FAC
2. Ambrosia psilostachya	40	Yes	FACU
3. Helminthotheca echioides	+	No	FACU
4.			
5.			
6.			
7.			
8.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	63	x 3 =	189
FACU species	40	x 4 =	160
UPL species	2	x 5 =	10
Column Totals:	105 (A)		359 (B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✔

Remarks:

Grassland.

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7.5	5YR3/2	100%					SaL	
7.5-17	7.5YR4/6	100%					L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✔

Remarks:

No hydric soil indicators

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators
FAC-neutral Test: w:u = 0:2

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 29 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 8

Investigator(s): W.L. Sward and E. Harris Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 3-4%

Subregion (LRR): C Lat: 33°06'52.23"N Long: 117°08'06.23"E Datum:

Soil Map Unit Name: Vista coarse sandy loam, 5-9% slopes NWI classification: PFOA

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sample point located along poorly defined drainage. CDFG jurisdictional habitat. Presence of wetland perennial species and upland herbaceous species may indicate a habitat in transition due to increasingly xeric hydrological conditions.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus camaldulensis	25	Yes	FAC
2. Salix laeviagata	35	Yes	FACW
3. Washingtonia robusta	+	No	FACW
4.			
	60%	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=15)			
1. Salix lasiolepis	10	Yes	FACW
2. Quercus agrifolia	5	No	UPL
3. Arrundo donax	25	Yes	FACW
4.			
5.			
	40%	= Total Cover	
Herb Stratum (Plot size: r=5')			
1. Helminthotheca echioides	22	Yes	FACU
2. Carduus pycnocephalus	10	Yes	UPL
3. Juncus phaeocephalus	+	No	FACW
4. Rumex conglomeratus	+	No	FACW
5. grass sp.	7	No	UPL
6. Avena barbata	5	No	UPL
7.			
8.			
	45%	= Total Cover	
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0%	= Total Cover	

% Bare Ground in Herb Stratum 20% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Disturbed southern riparian woodland

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5Y2.5/2	100%					L	
2-6	7.5YR3/2	75%	7.5YR4/6	25%	C	M	CL	
6-16	10YR3/2	80%	5YR3/4	20%	C	M	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✔

Remarks:

No hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In sufficient wetland hydrology indicators.
FAC-neutral Test: w:u = 3:2
No evidence of recent surface hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 29 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 9

Investigator(s): W.L. Sward and T. Baxter Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): pond bottom Local relief (concave, convex, none): none Slope (%): 1%

Subregion (LRR): C Lat: 33°06'52.71"N Long: 117°08'05.36"E Datum:

Soil Map Unit Name: Vista coarse sandy loam, 5-9% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sample point is located on the floor of an agricultural pond, the dam of which has been breached. CDFG and RPO jurisdictional habitat. Not Corps jurisdictional area based on landscape position outside of any OHWM or defined drainage and insufficient wetland indicators.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=15')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Juncus rugulosus	90	Yes	OBL
2. Rumex crispus	1	No	FAC
3. Raphanus sativus	2	No	UPL
4. Helminthotheca echioides	1	No	FACU
5.			
6.			
7.			
8.			
	94% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 10% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Herbaceous wetland.
Perennial wetland species likely holdover from when area ponded seasonally.

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	7.5YR2.5/2	70%	7.5YR4/6	30%	C	M	SiL	
9-16	7.5YR3/4	97%	5YR4/3	3%	C	M	SaC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✔

Remarks:

Wetland soil indicators are likely historic from when sample point was the floor of an agricultural pond that flooded seasonally. Hydrology necessary to produce these features is no longer present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): ___

Water Table Present? Yes ___ No ✔ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): ___

Wetland Hydrology Present? Yes ___ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-neutral Test: w:u = 1:0

Evidence of drift deposits at breach in dam but not in Sample Point area.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 29 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 10

Investigator(s): W.L. Sward and T. Baxter Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 3%

Subregion (LRR): C Lat: 33°07'03.73"N Long: 117°08'11.42"E Datum:

Soil Map Unit Name: Fallbrook-Vista sandy loams, 9-15% NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sample point is located on 1st terrace above low flow channel. Low flow channel is unvegetated. Corps non-wetland WUS. CDFG habitat and RPO wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	60%	Yes	FACW
2.			
3.			
4.			
	60% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=15')			
1. Salix lasiolepis	40%	Yes	FACW
2. Quercus agrifolia	+	No	UPL
3.			
4.			
5.			
	40% = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Cyperus eragrostis	5%	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 15% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Southern willow scrub

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR3/3	100%					CL	
3-11	10YR3/2	99%	7.5YR3/4	1%	C	M	SaCL	
11-14	10YR3/3	97%	10YR3/6	3%	C	M	SaCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ✔

Remarks:

No hydric soil indicators

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sufficient wetland hydrology indicators present.
FAC-neutral Test: w:u = 3:0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 29 Feb 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 11

Investigator(s): W.L. Sward and T. Baxter Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 3%

Subregion (LRR): C Lat: 33°07'03.85"N Long: 117°08'16.19"E Datum:

Soil Map Unit Name: Cienaba rocky coarse sandy loam, 9-30% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sample Point on terrace above deeply incised low flow channel; no vegetation rooted in channel. Corps non-wetland WUS in channel. CDFG jurisdictional habitat.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20'X60')	Absolute % Cover	Dominant Species?	Indicator Status
1. Washingtonia robusta	3%	No	FACW
2.			
3.			
4.			
	3% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=15')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Oenothera elata ssp. hirsutissima	70%	Yes	FACW
2. Euthamia occidentalis	+	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	70% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum <5% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Herbaceous wetland

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR2/2	95%	7.5YR4/6	5%	C	M	SaL	
5-18	10YR3/3	96%	7.5YR4/6	4%	C	M	SaL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✔

Remarks:

No hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Insufficient wetland hydrology indicators present.
FAC-neutral Test: w:u = 1:0
Drift deposits present in adjacent incised channel; not on terrace where soil pit was located.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 27 Nov 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 12

Investigator(s): W.L. Sward Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 2%

Subregion (LRR): C Lat: 33.117023° Long: -117.135073° Datum: WGS84

Soil Map Unit Name: Fallbrook/Vista sandy loams, 9-15% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	16%	yes	FACW
2.			
3.			
4.			
	16% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=15')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Rumex crispus	13%	no	FAC
2. Heliotropium curassavicum var. o.	3	no	FACU
3. Rhaphanus sativus	5	no	UPL
4. Bromus diandrus	3	no	UPL
5. Bromus hordeaceus	60	yes	FACU
6.			
7.			
8.			
	84% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum <5% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	16	x 2 =	32
FAC species	13	x 3 =	39
FACU species	63	x 4 =	252
UPL species	8	x 5 =	40
Column Totals:	100 (A)		363 (B)

Prevalence Index = B/A = 3.63

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Non-native grassland

SOIL

Sampling Point: 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR3/2.5	100%					CL	
2-16	7.5YR2.5/2	100%					SaCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Insufficient wetland hydrology indicators.
FAC-neutral Test: w:u = 1:1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 27 Nov 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 13

Investigator(s): W.L. Sward Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): none Slope (%): 2-3%

Subregion (LRR): C Lat: 33.1208529° Long: -117.133481° Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Corps Wetland 20' wide; CDFG and RPO habitat.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	10%	yes	FACW
2.			
3.			
4.			
	10% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=20')			
1. Salix lasiolepis	10%	yes	FACW
2. Ailanthus altissima	2	no	FACU
3.			
4.			
5.			
	12% = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Urtica dioica	25%	yes	FAC
2. Epilobium ciliatum	1	no	FACW
3. Typha domingensis	3	no	OBL
4. Sonchus asper	+	no	FAC
5. Cyperus sp.	+	no	FACW+
6.			
7.			
8.			
	29% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 40% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Herbaceous wetland understory, southern riparian forest overstory.

SOIL

Sampling Point: 13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR2/1	100%					SiL	
3-5	7.5YR2.3/2	70%	7.5YR3/4	30%	C	M	SaL	
5-20	7.5YR2/2	80%	7.5YR2/3	20%	C	M	SaCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ✔ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

Meets definition of a wetland soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ✔ No ___ Depth (inches): 6"

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 0"

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sufficient wetland hydrology indicators present.
FAC-neutral Test: w:u = 2:0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 27 Nov 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 14

Investigator(s): W.L. Sward Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): broad swale Local relief (concave, convex, none): none Slope (%): 2-3%

Subregion (LRR): C Lat: 33.1208529° Long: -117.133481° Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

No Corps jurisdiction or RPO wetlands. CDFG habitat.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=20')			
1. Quercus agrifolia	12%	yes	UPL
2.			
3.			
4.			
5.			
	12% = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Rhaphanus sativus	90%	yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	90% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 5% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	102	x 5 =	510
Column Totals:	102 (A)		510 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Plot located in area that is considered souther riparian forest on the vegetation map.

SOIL

Sampling Point: 14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR2/1	100%					SiL	
3-10	7.5YR2.5/2	100%						
10-16	7.5YR3/2	100%						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC-neutral Test: w:u = 0:2

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 27 Nov 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 15

Investigator(s): W.L. Sward Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 3+%

Subregion (LRR): C Lat: 33.108919° Long: -117.129614° Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification: PFOA

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

CDFG and RPO habitat.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	15%	yes	FACW
2. Eucalyptus camaldensis	15	yes	FAC
3. Washingtonia robusta	5	no	FACW
4. Schinus molle	5	no	FACU
	40%	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=20')			
1. Schinus molle	2%	yes	FAC
2. Olea europea	1	no	UPL
3. Eucalyptus camaldensis	5	yes	FAC
4.			
5.			
	8%	= Total Cover	
Herb Stratum (Plot size: r=5')			
1. Atriplex prostrata	48%	yes	FACW
2. Anemopsis	30	yes	OBL
3. Apium graveolens	2	no	FACW
4.			
5.			
6.			
7.			
8.			
	80%	= Total Cover	
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0%	= Total Cover	

% Bare Ground in Herb Stratum 5% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Herbaceous wetland understory, eucalyptus forest overstory

SOIL

Sampling Point: 15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR3/1	100%					SaL	
4-13	10YR3/2	60%					CL	
	10YR2/1	40%					CL	
13-18	10YR3/1	80%	2.5YR4/8	20	RM	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✔

Remarks:

No hydric soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Insufficient hydrology indicators present.
FAC-neutral Test: w:u = 3:0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 27 Nov 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 16

Investigator(s): W.L. Sward Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): low flow channel Local relief (concave, convex, none): none Slope (%): 2%

Subregion (LRR): C Lat: 33.108919° Long: -117.129614° Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sample point located in drainage bottom. Corps and CDFG jurisdictional, and RPO wetland.
Potential problem area for difficulty in confirmation of hydric soil indicator. Corps jurisdiction based on strong hydrology and vegetation indicators.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 4'X60')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 4'X40')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 4'X10')			
1. Atriplex prostrata	60%	yes	FACW
2. Anemopsis californica	15	yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	75% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 5% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Herbaceous wetland understory, eucalyptus forest overstory. No trees or shrubs rooted in low flow channel.

SOIL

Sampling Point: 16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR2/2	100%					SiL	
3-18	10YR3/1	92%	7.5YR4/6	8%	M	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ✔ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

Potentially Dark Surface/A12. Pit depth insufficient for this conclusion.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sufficient hydrology indicators present.
FAC-neutral Test: w:u = 2:0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 27 Nov 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 17

Investigator(s): W.L. Sward Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): shore of pond Local relief (concave, convex, none): none Slope (%): 1-2%

Subregion (LRR): C Lat: 33.1100831° Long: -117.1274531° Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification: PFOA

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Non-wet WUS; CDFG jurisdictional habitat and RPO wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20'X60')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	20	yes	FACW
2. Salix laevigata	30	yes	FACW
3. Eucalyptus camaldulensis	15	yes	FAC
4.			
	65%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 20'X30')			
1. Washingtonia robusta	2	no	FACW
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size: 5'X5')			
1. Eleocharis montevidensis	35	yes	FACW
2. Apium graveolens	40	yes	FACW
3. Atriplex prostrata	+	no	FACW
4. Cynodon dactylon	25	yes	FACU
5.			
6.			
7.			
8.			
	100%	= Total Cover	
Woody Vine Stratum (Plot size: 20'X20'')			
1.			
2.			
	0%	= Total Cover	

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Southern riparian woodland.

SOIL

Sampling Point: 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR2/2	100%					SiL	
9-17	10YR2/2	100%					L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ✔ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point located below culvert inlet that drains pond.
FAC-neutral Test: w:u = 4:1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 27 Nov 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 18

Investigator(s): W.L. Sward Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): shore of pond Local relief (concave, convex, none): none Slope (%): 1-2%

Subregion (LRR): C Lat: 33.1102411° Long: -117.1274522° Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification: PFOA

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Corps and CDFG jurisdictional habitat, and RPO wetland.
Potential problem area for soils.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20'X30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 20'X30')			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size: 5'X5')			
1. Typha domingensis	40	yes	OBL
2. Apium graveolens	5	no	FACW
3. Cotula coronopifolia	3	no	FAC
4.			
5.			
6.			
7.			
8.			
	48%	= Total Cover	
Woody Vine Stratum (Plot size: 5'X10')			
1.			
2.			
	0%	= Total Cover	

% Bare Ground in Herb Stratum 45% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Freshwater marsh

SOIL

Sampling Point: 18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR2/1	100%					CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ✔ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ No ___

Remarks:

Potentially Dark Surface/A12. Pit depth insufficient for this conclusion.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ✔ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sample point located below culvert inlet that drains pond.
FAC-neutral Test: w:u = 1:0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 27 Nov 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 19

Investigator(s): W.L. Sward Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 3-4%

Subregion (LRR): C Lat: 33.1103056° Long: -117.1274518° Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification: none

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20'X60')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	40%	yes	UPL
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 20'X30')			
1. Quercus agrifolia	5%	yes	UPL
2. Schinus molle	1	no	FACU
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 5'X5')			
1. Cynodon dactylon	2%	no	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	2% = Total Cover		
Woody Vine Stratum (Plot size: 15'X15')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 15% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 0	x 1 =	
FACW species 0	x 2 =	
FAC species 0	x 3 =	
FACU species 3	x 4 =	12
UPL species 45	x 5 =	225
Column Totals: 48 (A)		237 (B)

Prevalence Index = B/A = 4.9

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Coast live oak woodland.
Abundant oak leaf litter.

SOIL

Sampling Point: 19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR3/2	100%					SaL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators.
Refusal at 10" due to dense oak roots.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Insufficient hydrology indicators.
FAC-neutral Test: w:u = 0:2

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills City/County: San Marcos/San Diego Sampling Date: 27 Nov 2012

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 20

Investigator(s): W.L. Sward Section, Township, Range: S 19, T 12S, R 2W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 2%

Subregion (LRR): C Lat: 33.111681° Long: -117.126904° Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification: PFOA

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus camaldensis	70%	yes	FAC
2. Washingtonia robusta	2	no	FACW
3.			
4.			
	72% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=20')			
1. Eucalyptus camaldensis	10%	yes	FAC
2. Washingtonia robusta	5	yes	FACW
3.			
4.			
5.			
	15% = Total Cover		
Herb Stratum (Plot size: r=5')			
1. Atriplex prostrata	80%	yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	80% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Eucalyptus forest; sample point comprised of invasive species.

SOIL

Sampling Point: 20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR3/3	100%					LSa	
8-16	10YR2.5/2	100%					SaL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✔

Remarks:

No hydric soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Insufficient hydrology indicators present.
FAC-neutral Test: w:u = 2:0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills/Valiano City/County: San Marcos/San Diego Sampling Date: 22 July 2013

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 21

Investigator(s): S. Nigro & G. Aldridge Section, Township, Range: S , T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): C Lat: Long: Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification:

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

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

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

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

Hydrophytic Vegetation Present?	Yes	No ✔	**Is the Sampled Area within a Wetland?** Yes No ✔
Hydric Soil Present?	Yes	No ✔	
Wetland Hydrology Present?	Yes	No ✔	

Remarks:

Non-wetland waters

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=10')			
1. Heliotropium curassavicaum	20	yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	20% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 35% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No ✔

Remarks:

Upland vegetation present.

SOIL

Sampling Point: 21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR3/3	100%					Lmy Sand	
4-18	10YR2/1	100%					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators present.

Ph 2-3

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Insufficient hydrology indicators present.

FAC-neutral Test: w:u = 0:1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills/Valiano City/County: San Marcos/San Diego Sampling Date: 22 July 2013

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 22

Investigator(s): S. Nigro & G. Aldridge Section, Township, Range: S , T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): C Lat: Long: Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification:

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

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

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

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

Hydrophytic Vegetation Present?	Yes	No ✔	**Is the Sampled Area within a Wetland?** Yes No ✔
Hydric Soil Present?	Yes	No ✔	
Wetland Hydrology Present?	Yes ✔	No	

Remarks:

Non-wetland waters

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=10')			
1. Stipa miliaceum	3	yes	UPL
2. Carduus pycnocephalus	+		UPL
3. Helminthotheca echioides	+		FACU
4. Malva parviflora	+		UPL
5. Atriplex prostrata	2	yes	FACW
6. Apium graveolens	+		UPL
7. Cynodon dactylon	2	yes	FACU
8. Plantago major	2	yes	FAC
	10% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 40% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	2	x 3 =	6
FACU species	2.25	x 4 =	9
UPL species	3.75	x 5 =	18.75
Column Totals:	10 (A)		37.75 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No ✔

Remarks:

Upland vegetation present.

+=trace amount (< 1 %)

SOIL

Sampling Point: 22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR3/3	100%					Lmy Sand	
3-21	10YR2/1	100%					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ **No** ✔

Remarks:

No hydric soil indicators present.

Ph 6-7

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

2 secondary hydrology indicators present.

FAC-neutral Test: w:u = 1:2

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills/Valiano City/County: San Marcos/San Diego Sampling Date: 22 July 2013

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 23

Investigator(s): S. Nigro & G. Aldridge Section, Township, Range: S , T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): C Lat: Long: Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification:

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

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

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

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

Hydrophytic Vegetation Present?	Yes ____	No ✔	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ____	No ✔	

Remarks:

Non-wetland waters

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=10')			
1. Stipa miliaceum	+		UPL
2. Plantago major	+		FAC
3. Cynodon dactylon	+		FACU
4. Xanthium strumarium	+		FAC
5. Rumex crispus	+		FACW
6.			
7.			
8.			
	<5% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 75% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: - (A)

Total Number of Dominant Species Across All Strata: - (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: N/A (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	2.25	x 3 =	6.75
FACU species	1	x 4 =	4
UPL species	1	x 5 =	5
Column Totals:	4.25 (A)		15.75 (B)

Prevalence Index = B/A = 3.7

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✔

Remarks:

Unvegetated drainage (vegetative cover less than 5%). Few individuals of scattered vegetation present.

+=trace amount (< 1 %)

SOIL

Sampling Point: 23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR2.5/2	100%					Lmy Sand	
5-17	10YR3/4	100%					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators present.

Ph 8-9

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Insufficient hydrology indicators present.

FAC-neutral Test: w:u = 0:2

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills/Valiano City/County: San Marcos/San Diego Sampling Date: 22 July 2013

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 24

Investigator(s): S. Nigro & G. Aldridge Section, Township, Range: S , T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): C Lat: Long: Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification:

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

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

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

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

Hydrophytic Vegetation Present?	Yes	No ✔	**Is the Sampled Area within a Wetland?** Yes No ✔
Hydric Soil Present?	Yes	No ✔	
Wetland Hydrology Present?	Yes	No ✔	

Remarks:

Non-wetland waters

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=10')			
1. Cynodon dactylon	30	yes	FACU
2. Rumex crispus	10	yes	FAC
3. Brachypodium distachyon	+		UPL
4.			
5.			
6.			
7.			
8.			
	40% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 20% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	30	x 4 =	120
UPL species	0.25	x 5 =	1.25
Column Totals:	40.25 (A)		151.25 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No ✔

Remarks:

Upland vegetation present.

+=trace amount (< 1 %)

SOIL

Sampling Point: 24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR3/2	100%					Loam	
13-15	10YR4/3	100%					Lmy Sand	
15-18	10YR3/3	100%					Silty Lm	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

No hydric soil indicators present.

Ph 10-12

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Two secondary hydrology indicators present.
FAC-neutral Test: w:u = 0:1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills/Valiano City/County: San Marcos/San Diego Sampling Date: 22 July 2013

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 25

Investigator(s): S. Nigro & G. Aldridge Section, Township, Range: S , T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): C Lat: Long: Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification:

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

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

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

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

Hydrophytic Vegetation Present?	Yes	No ✔	**Is the Sampled Area within a Wetland?** Yes No ✔
Hydric Soil Present?	Yes	No ✔	
Wetland Hydrology Present?	Yes	No ✔	

Remarks:

Non-wetland waters

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=10')			
1. Atriplex prostrata	+		FACW
2. Sonchus oleraceus	+		UPL
3. Plantago major	+		FAC
4.			
5.			
6.			
7.			
8.			
	1% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 10% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: - (A)

Total Number of Dominant Species Across All Strata: - (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: N/A (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0.25	x 2 =	0.5
FAC species	0.25	x 3 =	0.75
FACU species	0	x 4 =	0
UPL species	0.25	x 5 =	1.25
Column Totals:	0.75 (A)		2.25 (B)

Prevalence Index = B/A = 3.3

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No ✔

Remarks:

Unvegetated drainage (vegetative cover less than 5%). Few individuals of scattered vegetation present.

+=trace amount (< 1 %)

SOIL

Sampling Point: 25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR3/3	100%					Silt Loam	
3-9	10YR4/3	100%					Lmy Sand	
9-14	10YR3/3	100%					Sdy ClyLm	
14-18	10YR3/2	100%					Sdy ClyLm	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

No hydric soil indicators present.

Ph 13-15

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Insufficient hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills/Valiano City/County: San Marcos/San Diego Sampling Date: 22 July 2013

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 26

Investigator(s): S. Nigro & G. Aldridge Section, Township, Range: S , T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): C Lat: Long: Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification:

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

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

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

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

Hydrophytic Vegetation Present?	Yes	No ✔	**Is the Sampled Area within a Wetland?** Yes No ✔
Hydric Soil Present?	Yes	No ✔	
Wetland Hydrology Present?	Yes	No ✔	

Remarks:

Non-wetland waters

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size: r=10')			
1. Heliotropium curassavicum	3	yes	FACU
2. Rumex crispus	2	yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	5%	= Total Cover	
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0%	= Total Cover	

% Bare Ground in Herb Stratum 20% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	2	x 3 =	6
FACU species	3	x 4 =	12
UPL species	0	x 5 =	0
Column Totals:	5 (A)		18 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No ✔

Remarks:

Upland vegetation present.

SOIL

Sampling Point: 26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR2/2	100%					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators present.

Ph 16-17

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Insufficient hydrology indicators present.
FAC-neutral test: W:U=0:1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Eden Hills/Valiano City/County: San Marcos/San Diego Sampling Date: 22 July 2013

Applicant/Owner: Integral Communities; IPQ-08 State: CA Sampling Point: 27

Investigator(s): S. Nigro & G. Aldridge Section, Township, Range: S , T 12S, R 2W

Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): C Lat: Long: Datum: WGS84

Soil Map Unit Name: Visalia sandy loams, 2-5% slopes NWI classification:

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

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

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

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

Hydrophytic Vegetation Present?	Yes	No ✔	**Is the Sampled Area within a Wetland?** Yes No ✔
Hydric Soil Present?	Yes	No ✔	
Wetland Hydrology Present?	Yes	No ✔	

Remarks:

Non-wetland waters

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r=10')			
1. Stipa miliaceum	2		UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	<5% = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: - (A)

Total Number of Dominant Species Across All Strata: - (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: N/A (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	2	x 5 =	10
Column Totals:	2 (A)		10 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No ✔

Remarks:

Unvegetated drainage (vegetative cover less than 5%). Few individuals of scattered vegetation present.

SOIL

Sampling Point: 27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR4/3	100%					Sndy Lm	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators present.

Ph 16-17

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Insufficient hydrology indicators present.

Appendix H

BIOLOGICAL RESOURCES SUMMARY OF THE OFF-SITE SEWER OPTIONS

Appendix H
BIOLOGICAL RESOURCES SUMMARY OF THE OFF-SITE SEWER OPTIONS
VALIANO PROJECT

The purpose of this report is to describe the results of a general biological survey of the off-site sewer options for the Valiano project, analyze potential impacts to biological resources from implementation of the different options, and discuss potential mitigation measures.

As proposed, the project would include an on-site wastewater treatment and water reclamation facility. However, as an alternative to on-site treatment, the project may implement one of three off-site sewer options alternatives: (1) Escondido option, (2) Vallecitos option, and (3) Harmony Grove option. These options are further discussed below.

OFF-SITE SEWER OPTIONS

Off-site Sewer Option 1: Connection to the City of Escondido (City) Hale Avenue Resource Recovery Facility (HARRF)

This option would be via an out-of-service agreement between the County of San Diego (County) and City. It involves the following off-site facilities/activities (Figure 1a):

(1) Installation of approximately 2,700 linear feet of new sewer main from the new LS-12 on the Project site to an existing City pump station (LS-12), with these facilities to be located within existing City and County streets. This line will be owned and operated by the City.

(2) Installation of approximately 1,600 linear feet of new force main pipeline from the Project site to an existing City sewer line, with the new facilities to be located within an existing San Diego Gas & Electric (SDG&E) easement. This line will be owned and operated by the City.

(3) Abandonment of approximately 1,600 linear feet of existing sewer force main located in an existing City easement. The abandonment of the force main is anticipated to be slurry fill of the line; force main removal is not anticipated.

(4) Installation of approximately 200 linear feet of new recycled water pipeline from the proposed Rincon Del Diablo MWD (District) Recycled Water (RW) Pipeline, to be constructed as part of the Harmony Grove Village development, to the Project site, with the new facilities to be located within City streets. This line will be owned and operated by the District. The District's existing RW system will convey RW from HARRF to the vicinity of Country Club Drive and the SDG&E easement.

The RW water from HARRF can also be stored in the Wet Weather Storage on the project site through the existing off-site RW system and the proposed RW backbone system through the Project. This will allow the City to reduce peak wet weather impacts on the City's land outfall. The backbone RW system will include a pipeline through the

main arterial street in the northern portion of the Project, then, east in Mt. Whitney Road, south on Country Club Drive to the connection with the existing RW system in the vicinity of the SDG&E easement and the new LS-12.

(5) Installation of approximately 1,000 linear feet of a new sewer return line from the Wet Weather Storage to the new gravity sewer main in Country Club Drive, as identified in Item 1 above. This line will be within existing County streets and will be owned and operated by the City.

Off-site Sewer Option 2: Connection to Vallecitos Water District (VWD) Facilities

This option would be via annexation into the VWD for sewer service only. It involves the installation of approximately 3,400 linear feet of new force main from the Project site to an existing VWD pipeline (Figure 2a). This would require four on-site pump stations. One sewer lift station will be private and owned and operated by the Valiano Homeowners Association (HOA). The three larger lift stations will be owned and operated by the VWD and will have back-up generators. The on-site sewer system will be owned and operated by VWD.

Existing VWD pipelines would need to be upgraded as follows:

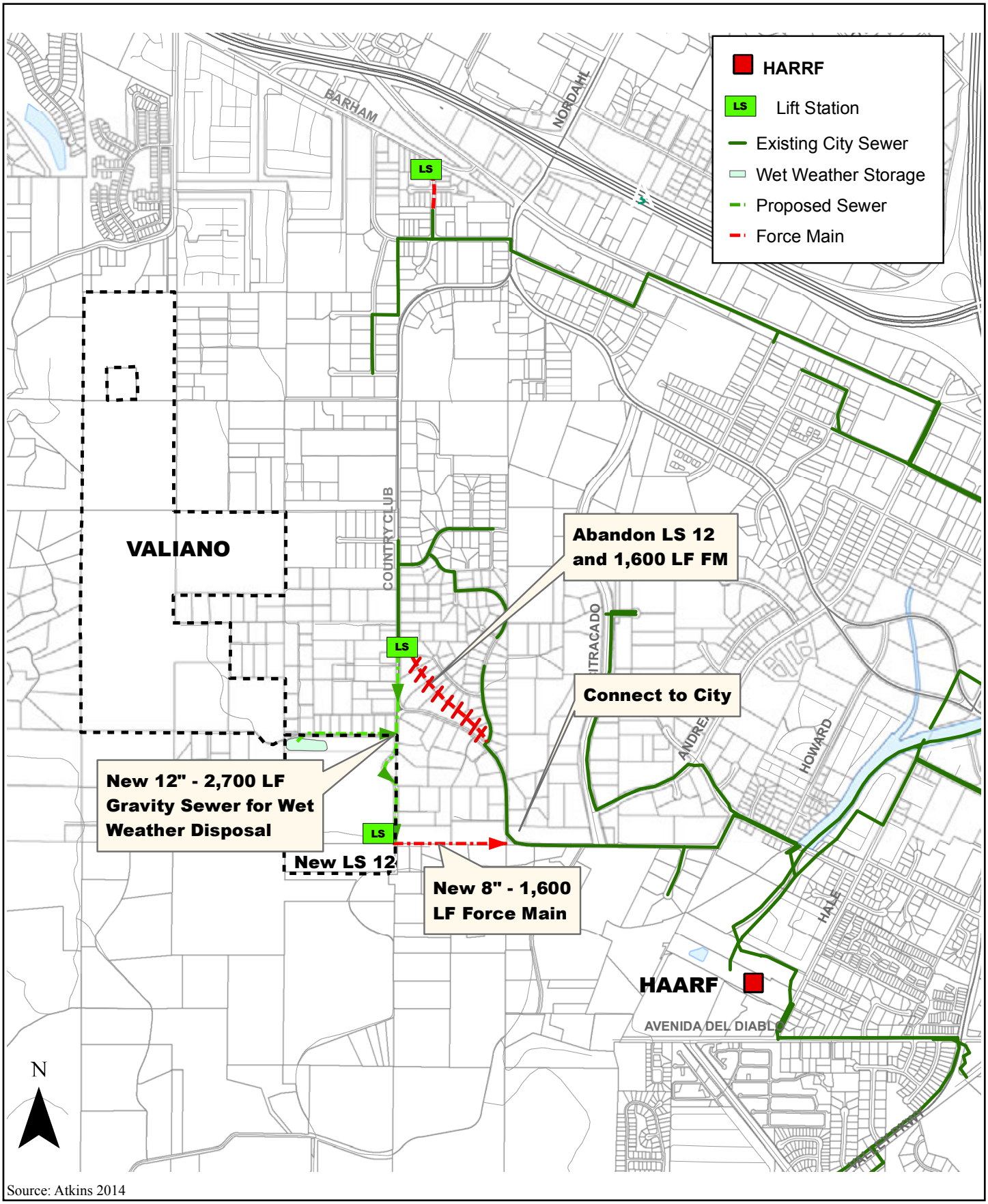
- Approximately 3,200 linear feet of pipeline through the mobile home park and on Barham Drive
- Approximately 500 linear feet of pipeline under State Route (SR-) 78 from Barham Drive to Rancheros Drive

Additional facilities that may require upgrading have been identified in the VWD *Water, Wastewater, and Recycled Water Master Plan* (November 2010) and may be required as a condition of development by VWD or contribution through annexation and connection fees. The VWD *Water, Wastewater, and Recycled Water Master Plan Final Program EIR SCH No. 2010071073* (March 2011) includes the following capital improvement projects.

- SP-2 – replace 3,200 linear feet of 21-inch sewer with 39-inch sewer
- SP-11 – replace 1,400 linear feet of 21-inch sewer with 36-inch, and install 800 linear feet of 8-inch sewer
- SP-12 – replace 2,000 linear feet of 21-inch sewer with 36-inch
- Possible improvements to the Land Outfall

Off-site Sewer Option 3: Connection to the Harmony Grove Water Reclamation Facility

This option would occur via expansion of the County Harmony Grove Sewer Service Area. This option involves: (1) the installation of approximately 5,100 linear feet of force main from the Project Sewer Lift Station site to the Harmony Grove water reclamation facility (WRF), with these facilities to be located within existing City/County streets; and (2) the construction of a new pump station and backup power generator at the Valiano Sewer Lift Station site (Figure 3a). The County would own and operate the sewer lift station.



Source: Atkins 2014

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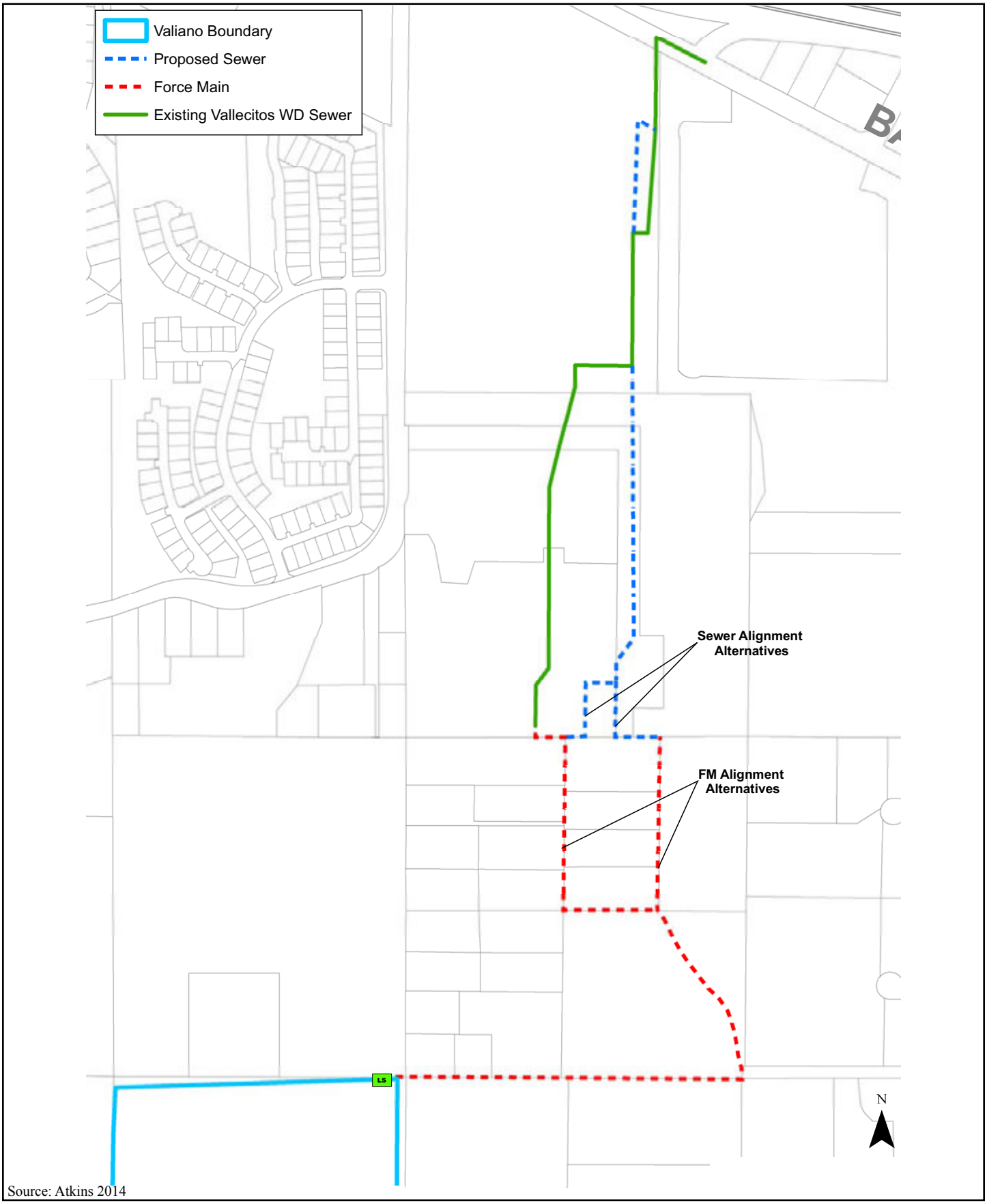
Off-site Sewer Option 1: Connection to City of Escondido Hale Avenue Resource Recovery Facility

VALIANO

Figure 1a

HELIX Environmental Planning



Source: Atkins 2014

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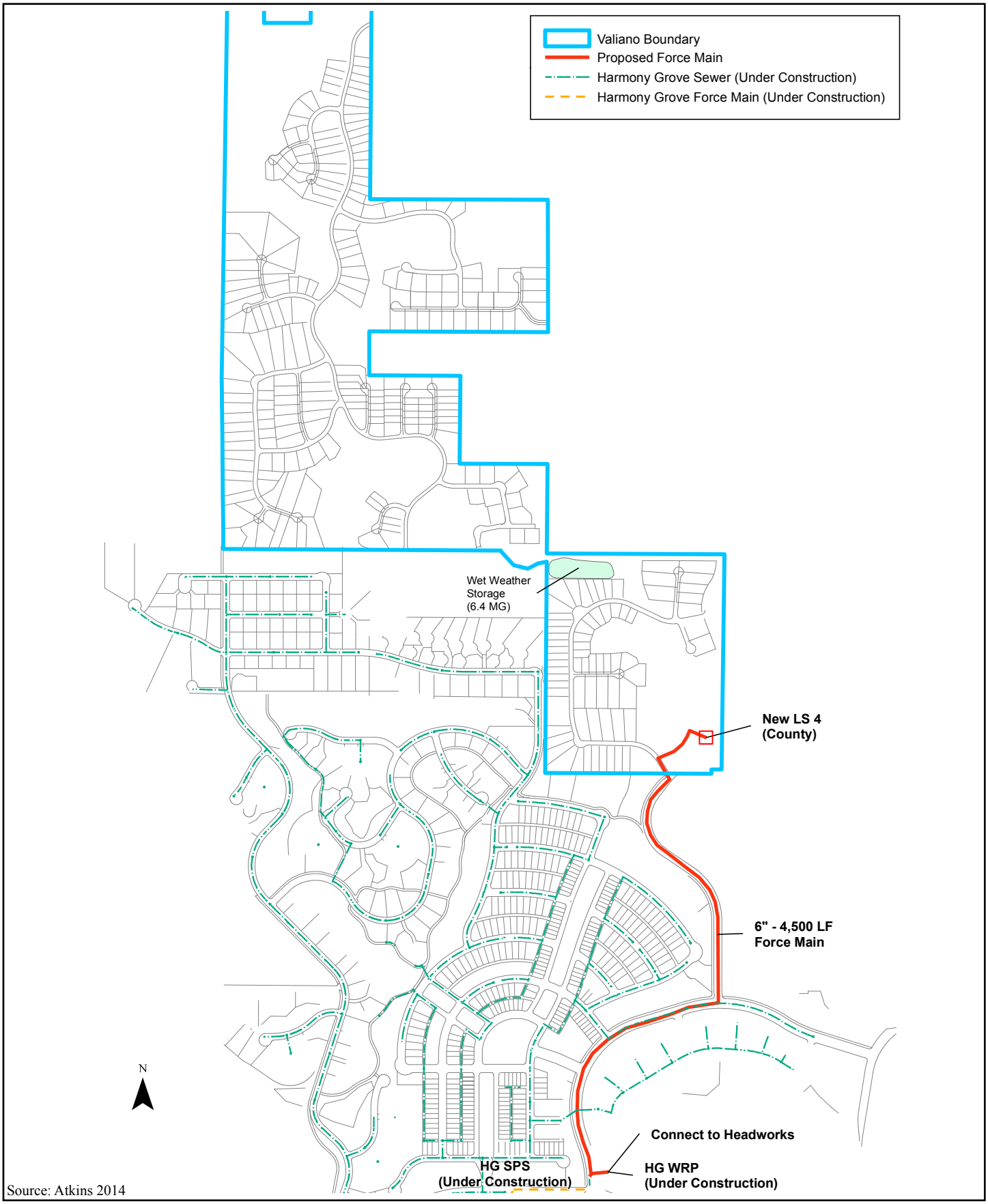
Off-site Sewer Option 2: Off-site Connection to Vallecitos Water District Facilities

VALIANO

Figure 2a

HELIX Environmental Planning



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Source: Atkins 2014

Off-site Sewer Option 3: Connection to the Harmony Grove Treatment Plant

VALIANO

HELIX Environmental Planning

Figure 3a

This option will require working with the County on modifications to the WRF design criteria and potentially re-rating the design flow at the WRF to include the Project's sewer flows.

METHODS

HELIX biologist Stacy Nigro conducted vegetation mapping and a general biological survey for the three off-site sewer options on July 22, 2014. The survey was conducted according to County Requirements (2010), which included mapping vegetation communities within 100 feet of the potential off-site sewer alignments (Figures 1b, 2b, and 3b). Vegetation was mapped on a 1"=100' scale aerial. The survey was conducted on foot with the aid of binoculars, and plant and animal species were recorded. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or scat. Plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. Focused species surveys were not conducted.

Prior to conducting the biological survey, a search of the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (2014) for information regarding sensitive species known to occur within the vicinity of the study area was conducted, as well as a review of U.S. Fish and Wildlife (USFWS) and Multiple Species Conservation Program (MSCP) sensitive species databases. A search of the San Diego Plant Atlas (SDNHM 2014) also was conducted.

Nomenclature used in this report comes from Holland (1986) and Oberbauer (2008) for vegetation; Baldwin et al (2012) for plants; and American Ornithologists' Union (2014) for birds.

SURVEY RESULTS

Vegetation

Off-site Sewer Option 1: Connection to the City of Escondido Hale Avenue Resource Recovery Facility

A total of nine vegetation communities were mapped within the Option 1 study area: coast live oak woodland, Diegan coastal sage scrub (including disturbed), non-native grassland, eucalyptus forest, extensive agriculture, intensive agriculture, non-native vegetation, disturbed habitat, and developed land (Figure 1b, Table 1).

Off-site Sewer Option 2: Connection to Vallecitos Water District Facilities

A total of eight vegetation communities were mapped within the Option 2 study area: coast live oak woodland, Diegan coastal sage scrub, non-native grassland, eucalyptus woodland, non-native vegetation, orchard, disturbed habitat, and developed land (Figure 2b, Table 1).

Off-site Sewer Option 3: Connection to the Harmony Grove Water Reclamation Facility

A total of seven vegetation communities were mapped within the Option 3 study area: coast live oak woodland, non-native grassland, eucalyptus woodland, non-native vegetation, intensive agriculture, disturbed habitat, and developed land (Figure 3b, Table 1).

Table 1
VEGETATION COMMUNITIES IN THE STUDY AREA OF THE OFF-SITE SEWER OPTIONS

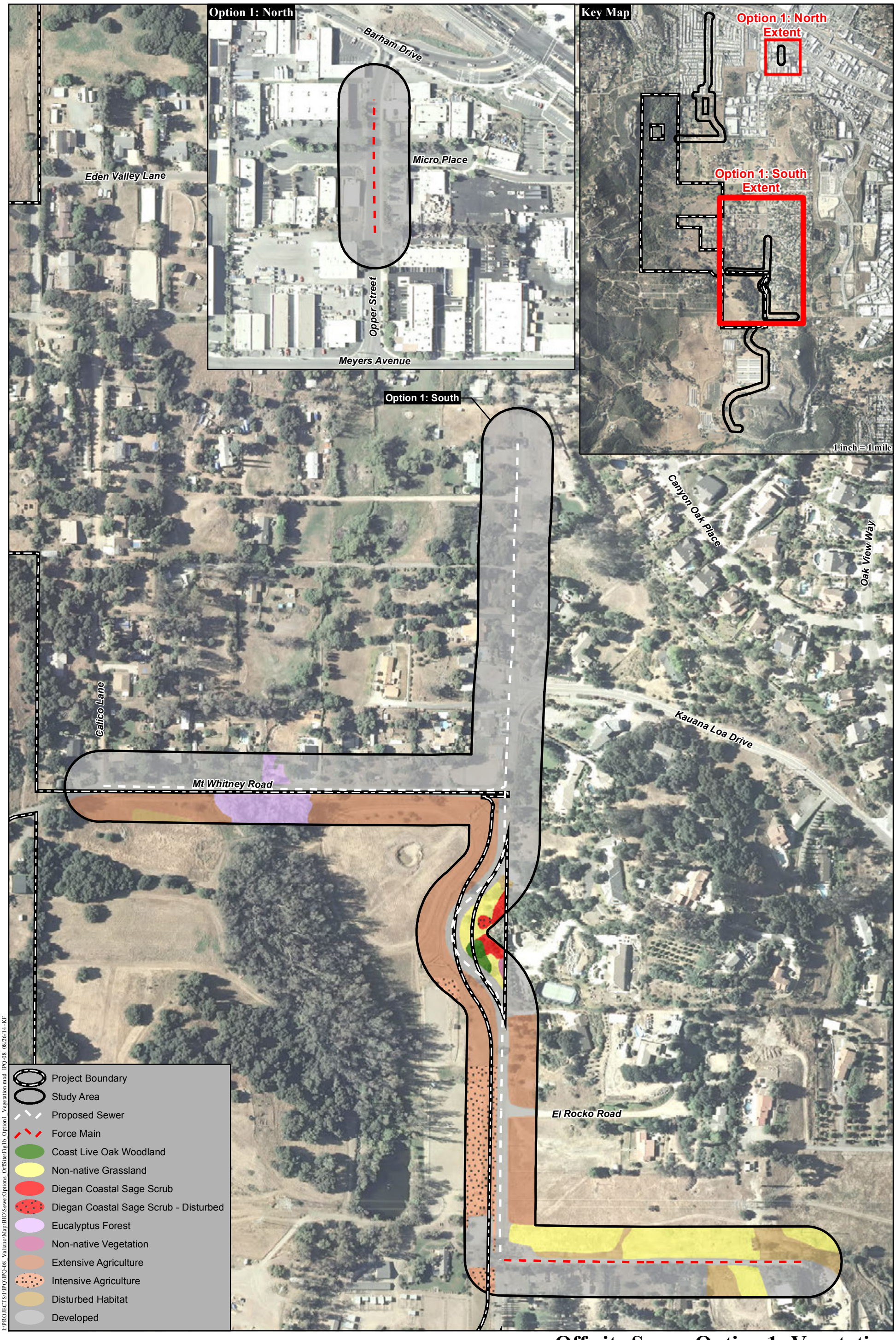
VEGETATION COMMUNITY*	ACREAGE**		
	Option 1 City of Escondido /Hale Avenue	**Option 2 Vallecitos Water District**	**Option 3 Harmony Grove Reclamation Facility**
Coast Live Oak Woodland (71160)	0.1	0.1	<0.1
Diegan Coastal Sage Scrub - including disturbed (32500)	0.1	0.2	--
Eucalyptus Forest (79100)	0.6	--	--
Eucalyptus Woodland (11100)	--	0.1	0.6
Non-native Grassland (42200)	1.8	3.2	1.7
Non-native Vegetation (11000)	<0.1	0.7	<0.1
Orchard (18100)	--	0.5	--
Intensive Agriculture (18200)	1.0	--	0.3
Extensive Agriculture (18300)	4.2	--	--
Disturbed Habitat (11300)	0.8	3.3	0.1
Developed Land (12000)	14.6	22.5	17.7
Total	**23.3**	**30.6**	**20.5**

* Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008).
** Rounded to the nearest 0.1 acre, thus, totals reflect rounding.

Sensitive Species

Plants

No sensitive plant species were detected within the off-site sewer options study area during the July 22, 2014 biological survey. Furthermore, no sensitive plant species are expected to occur within the study areas of any of the three off-site sewer option alignments, as many of these areas are developed, overlap with previously surveyed areas for the proposed project (no sensitive plants were documented on the proposed project site), consist of agricultural lands or other disturbed, non-native habitats, lack appropriate soil types, and contain limited area of potentially suitable habitat.



Off-site Sewer Option 1: Vegetation

VALIANO

HELIX Environmental Planning

0 250 Feet

Figure 1b

Key Map

Map Extent

1 inch = 1 mile

Project Boundary
Study Area
Proposed Sewer
Force Main
Coast Live Oak Woodland
Non-native Grassland
Diegan Coastal Sage Scrub
Eucalyptus Woodland
Non-native Vegetation
Orchard
Disturbed Habitat
Developed

78

Barham Drive

Hill Valley Drive

Hill Valley Road

Hill Valley Drive

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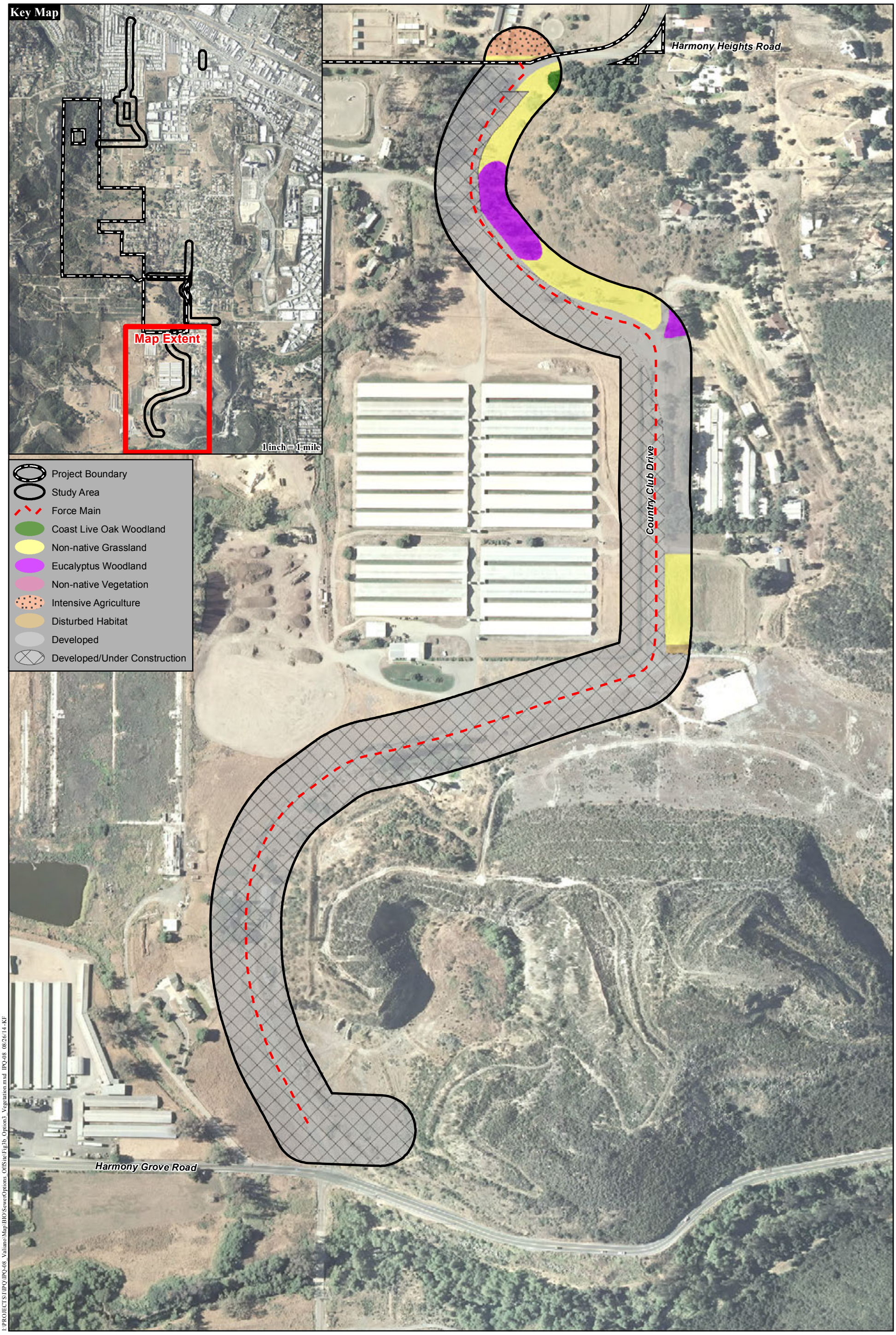
Off-site Sewer Option 2: Vegetation

VALIANO

HELIX Environmental Planning

0 300 Feet

Figure 2b



Off-site Sewer Option 3: Vegetation

VALIANO

HELIX Environmental Planning

0 250 Feet

Figure 3b

Animals

No sensitive animal species were detected within the off-site sewer options study area during the July 22, 2014 biological survey. Although no sensitive animal species were detected, there is potential for nesting birds, including raptors, to occur within portions of the study areas for each of the three off-site sewer options. No federally or state listed species are expected to occur within the study area due to lack of suitable habitat, but lower sensitivity birds such as Cooper's hawk (*Accipiter cooperi*) and red-shouldered hawk (*Buteo lineatus*) may utilize coast live oak woodland and eucalyptus woodland/forest for perching or nesting, and grassland may be used by other sensitive raptor species such as northern harrier (*Circus cyaneus*). No wetland or riparian habitat occurs within the study areas of the off-site sewer options, therefore, no riparian-associated birds are expected to occur.

IMPACTS AND MITIGATION

Implementation of any of the three off-site sewer options described above would be located within developed lands and would not impact sensitive vegetation communities, thus no habitat mitigation would be required. No direct impacts to sensitive vegetation communities or sensitive plant or animal species would occur.

The following measure would be implemented in order to avoid indirect impacts from construction noise to raptors during project implementation:

No grubbing, clearing, or grading within 300 feet of an active raptor nest during the raptor-breeding season (February 1 to July 15) will occur. As such, all grading permits, improvement plans, and the final map will state the same. If grubbing, clearing, or grading is proposed during the raptor breeding season, a pre-grading survey will be conducted within 3 days prior to clearing to determine if raptors occur within the areas directly impacted by grading or indirectly impacted by noise. If there are no raptors nesting (includes nest building or other breeding/nesting behavior) within this area, development will be allowed to proceed upon approval of the Director of PDS with concurrence from USFWS and CDFW. However, if raptors are observed nesting or displaying breeding/nesting behavior within the area, construction will be postponed until (1) all nesting (or breeding/nesting behavior) has ceased or until after July 15; or (2) a temporary noise barrier or berm will be constructed at the edge of the development footprint to reduce noise levels below 60 dB L_{eq} or ambient (if ambient is greater than 60 dB L_{eq}), to the satisfaction of the Director of PDS with concurrence from USFWS and CDFW. Alternatively, if approved by the Director of PDS with concurrence from USFWS and CDFW, the duration of construction equipment operation could be controlled to keep noise levels below 60 dB L_{eq} or ambient in lieu of or in concert with a wall or other sound attenuation barrier.

With implementation of the above measure, potential impacts to biological resources from any of the off-site sewer option alternatives would be mitigated to less than significant.

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