

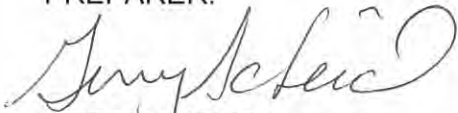
BIOLOGICAL RESOURCES REPORT LILAC HILLS RANCH SAN DIEGO COUNTY, CALIFORNIA

SPECIFIC PLAN
GENERAL PLAN AMENDMENT
REZONE
EIR
TENTATIVE MAP (MASTER)
TENTATIVE MAP (PHASE 1 IMPLEMENTING TM)
MAJOR USE PERMIT

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COUNTY OF SAN DIEGO
5510 OVERLAND AVENUE, THIRD FLOOR
SAN DIEGO, CA 92123
KIVA PROJECT: 09-0112513
SP 3810-12-001
GPA 3800-12-001
REZ 3600-12-003
TM 5571 RPL⁵ and 5572 RPL⁵
MUP 3300-12-005

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June 1, 2015 ~~June 4, 2014~~

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- 3: Southwestern Willow Flycatcher Habitat Assessment Report
- 4: Burrowing Owl Habitat Assessment Report
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- 17: Conceptual Resource Management Plan for On-site Biological Open Space
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Glossary of Terms and Acronyms

BMO	Biological Mitigation Ordinance
BMP	Best Management Practice
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CPA	Community Planning Area
County	County of San Diego
HLP	Habitat Loss Permit
I-15	Interstate 15
MBTA	Migratory Bird Treaty Act
MSCP	Multiple Species Conservation Program
NCCP	Natural Community Conservation Plan
PAMA	Pre-Approved Mitigation Area
RMP	Resource Management Plan
RPO	Resource Protection Ordinance
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SanGIS	San Diego Geographic Information Systems
SWPPP	Stormwater Pollution Prevention Plan
USDA	U.S. Department of Agriculture
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WPO	Watershed Protection Ordinance

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1.0 Introduction

This biological technical report was prepared for the proposed Lilac Hills Ranch Specific Plan and General Plan Amendment Area. It provides the details of the existing biological resources present or potentially present on-site, discusses direct and indirect impacts to these resources from the proposed project, and outlines proposed mitigation measures to compensate for unavoidable impacts to biological resources.

1.1 Purpose of the Report

The purpose of this report is to document the existing biological resources present or with the potential for occurrence on the Lilac Hills Ranch project site (project). In addition, this report describes the proposed impacts to these biological resources and recommends mitigation measures to avoid, minimize, and/or mitigate significant impacts with regards to federal, state, and local rules, regulations, and ordinances (i.e., California Environmental Quality Act [CEQA] and County of San Diego Resource Protection Ordinance [RPO]). The report has been prepared according to the County of San Diego Report Format and Content Requirements for biological resources (County of San Diego 2010).

1.2 Project Location and Description

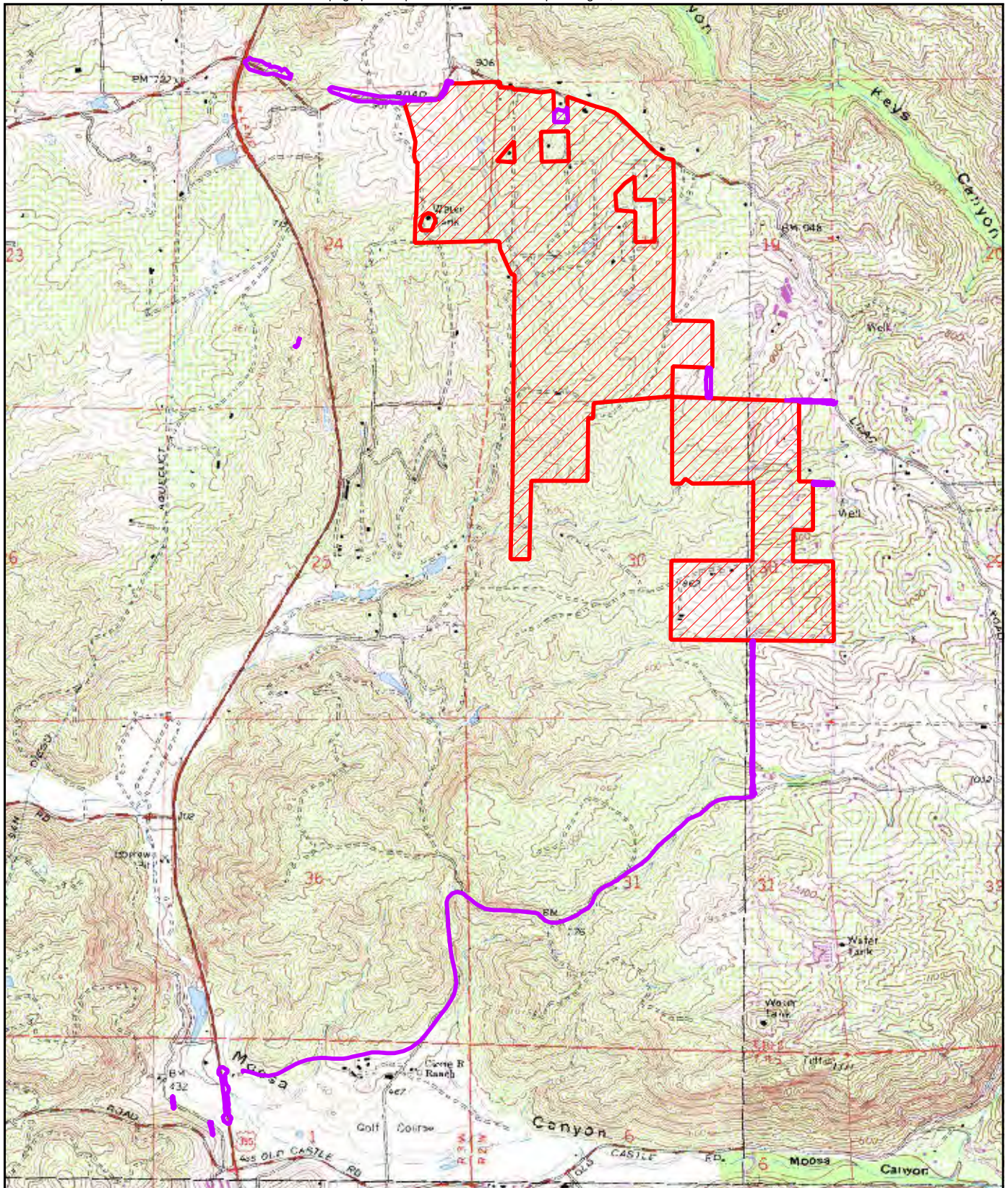
The proposed Lilac Hills Ranch community is approximately 608 acres composed of 59 contiguous properties and is located in northern unincorporated San Diego County 0.25 mile from the Interstate 15 (I-15) corridor on the east side with freeway access off the Old Highway 395 Interchange (Figure 1). The project site is located to the south and west of West Lilac Road with State Route 76 to the north, downtown Valley Center 10 miles to the east, downtown Escondido 16 miles to the south, and Interstate 15 and Old Highway 395 to the west. The Lilac Hills Ranch project is located primarily within the westernmost portion of the Valley Center Community Planning Area (CPA), although a small portion is within the Bonsall Community Plan area. From the northwest project corner, West Lilac Road serves as the northern and eastern boundary of the project site, while Circle R Drive is less than a 1/2 mile south of the project boundary. From the southwest project corner, the western boundary of the project runs along Standel Lane, which serves as the northwestern project boundary. The project is within Township 10 South, Range 3 West, Section 24, and Township 10 South, Range 2 West, Sections 19 and 30, on the U.S. Geological Survey (USGS) 7.5' Pala and Bonsall quadrangles (Figure 2). The project occurs within the Bonsall and Valley Center community planning areas and includes the parcels identified on Figure 3.



✱ Project Location

FIGURE 1

Regional Location





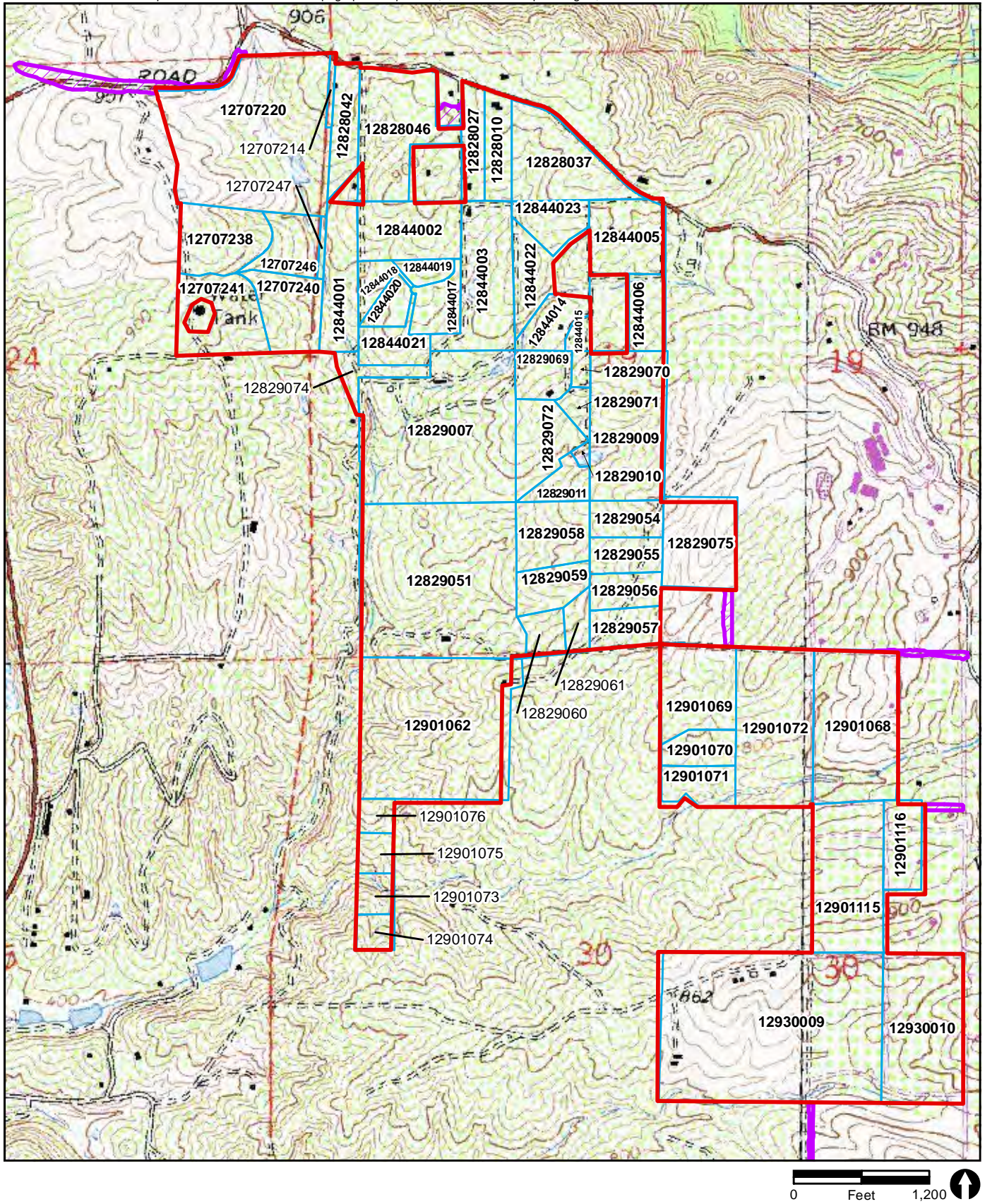
-  Project Boundary
-  Off-site Improvement Areas

FIGURE 2

Project Location on USGS Map



- Project Boundary
- Off-site Improvement Areas

FIGURE 3

APNs within Project Area on USGS Map

The Lilac Hills Ranch project proposes the development of a new mixed use master planned community. The proposed Specific Plan includes a maximum of 1,746 dwelling units with varying lot sizes, a neighborhood-serving commercial village center, public parks, retail uses, and a school site. Also, proposed on-site are a recycling collection facility, a wastewater reclamation facility, active orchards, and other supporting infrastructure. A Rezone is proposed to implement the Specific Plan by changing the existing Use and Development Regulations from A70 (Limited Agricultural) Zoning and RR (Rural Residential) to commercial and residential zones. The project would also include the submittal of a Master Tentative Map, Implementing Tentative Map, and a Major Use Permit. An Open Space Vacation for the two small open space easements within the project boundary would occur as part of the project.

1.3 Survey Methodologies

1.3.1 Literature Review

Prior to biological resource surveys being conducted on the property, a review of existing information on vegetation and sensitive species that occur or have the potential to occur in the vicinity of the project site was initiated. Existing vegetation mapping for the project vicinity as contained in the San Diego Geographic Information Systems (SanGIS) database (San Diego Association of Governments [SANDAG] 1995) was examined to get an initial assessment of the types of vegetation communities that may occur on-site. Agricultural maps from the SanGIS database were also reviewed. Existing information on sensitive species occurrences in the project vicinity from the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB) was reviewed to determine what species occurrences have been documented within and near the project area. Critical habitat areas for federal listed species that are in the vicinity of the project area were also examined (U.S. Fish and Wildlife [USFWS] 1994, 2003, 2011a, 2011b).

A project assessment letter issued by the County of San Diego Department of Planning and Land Use was used to focus on particular biological resources and issues for the project area (County of San Diego 2011). The assessment letter contained a list of sensitive species and other issues that are to be addressed in the biological technical report.

1.3.2 Biological Resource Surveys

Biological resource surveys were conducted on-site and in areas where off-site improvements are proposed by RECON biologists to document the existing vegetation communities, plant species, and wildlife species within the project area. Table 1 provides a list of survey dates, personnel, and weather conditions on survey days. Biological resource surveys were conducted by walking the project area on foot to access as much

TABLE 1
BIOLOGICAL RESOURCE SURVEY INFORMATION

Survey Date	Type of Survey	Time	Weather Conditions	Biologist Conducting Survey
February 14, 2011	Vegetation Mapping; General biology Surveys; SKR Habitat Assessment	8:00 A.M. - 3:00 P.M.		AIB, EJM
February 25, 2011	General biology Surveys; Wetland Delineation; SKR Habitat Assessment	8:00 A.M. - 3:00 P.M.		GAS, AIB, EJM
March 1, 2011	General Biology Surveys; Wetland Delineation	8:00 A.M. - 3:00 P.M.		GAS, AIB, EJM
March 3, 2011	General Biology Surveys; Hermes Copper Habitat Assessment; Wetland Delineation	8:00 A.M. - 3:00 P.M.		GAS, AIB, EJM
March 10, 2011	General Biology Surveys; Hermes Copper Habitat Assessment; Wetland Delineation	8:00 A.M. - 3:00 P.M.		GAS
April 18, 2011	General Biology Surveys; Hermes Copper Habitat Assessment; Wetland Delineation	8:00 A.M. - 3:00 P.M.		GAS
April 22, 2011	General Biology Surveys; Hermes Copper Habitat Assessment; Wetland Delineation	8:00 A.M. - 3:00 P.M.		GAS
May 17, 2011	LBV#1	6:30 A.M. - 9:30 A.M.	50–53° F; winds 0–1 mph; cloudy conditions	EJM, MAO
May 27, 2011	LBV#2; Rare Plant Survey	7:30 A.M. - 10:30 A.M.	57–79° F; winds 0–1 mph; clear conditions	GAS, PAD
June 2, 2011	Rare Plant and General Biology Surveys; Burrowing Owl Habitat Assessment	8:35 A.M. - 2:30 P.M.	64–77° F; winds 0–1 mph; clear conditions	GAS, EJM, MAO
June 3, 2011	Rare Plant and General Biology Surveys; Burrowing Owl Habitat Assessment	8:30 A.M. - 2:30 P.M.	58–76° F; winds 0–7 mph; high haze	GAS, EJM, MAO
June 6, 2011	LBV#3	7:30 A.M. - 11:00 A.M.	52–70° F; winds 0–3 mph; clear conditions	EJM, MAO
June 8, 2011	Rare Plant and General Biology Surveys	9:50 A.M. - 2:00 P.M.	62–72° F; winds 0–4 mph; clear conditions	EJM, MAO
June 10, 2011	Rare Plant Survey			GAS, KOV
June 16, 2011	LBV#4; Rare Plant Survey	7:15 A.M.- 11:00 A.M.	60–70° F; winds 0–5 mph; partly cloudy	GAS, MAO
June 27, 2011	LBV#5	7:30 A.M.- 11:00 A.M.	61–75° F; winds 0–2 mph; clear conditions	EJM, MAO
July 6, 2011	Wetland Delineation; General Biology Survey; Burrowing Owl Habitat Assessment	8:00 A.M. - 3:00 P.M.		GAS
July 7, 2011	SKR/Arroyo Toad Habitat Assessments	1:00 P.M. - 5:00 P.M.		GAS, APF
July 7, 2011	LBV#6	7:50 A.M. - 11:00 A.M.	72–90°F; winds 0–1 mph; clear conditions	EJM, MAO
July 18, 2011	LBV#7	6:20 A.M.- 10:00 A.M.	51–76° F; winds 0–1 mph; clear conditions	EJM, MAO
July 18, 2011	General Biology Survey	Following LBV #7		EJM, MAO

TABLE 1
BIOLOGICAL RESOURCE SURVEY INFORMATION
(continued)

Survey Date	Type of Survey	Time	Weather Conditions	Biologist Conducting Survey
July 28, 2011	LBV#8	7:15 A.M. - 9:55 A.M.	61–71° F; winds 0-2 mph; clear conditions	EJM, MAO
July 26, 2011	CGN#1	6:40 A.M. - 11:45 A.M.	58–86°F; winds 0–1 mph; clear conditions	EJM, MAO
August 2, 2011	CGN#2	6:45 A.M. - 10:30 A.M.	71–88°F; winds 0–1 mph; clear conditions	EJM, MAO
August 9, 2011	CGN#3	6:40 A.M. - 10:35 A.M.	56–76°F; winds 0–4 mph; cloudy conditions	EJM, MAO
August 26, 2011	Willow Flycatcher and Burrowing Owl Habitat Assessment	10:00 A.M. - 3:00 P.M.		GAS, JCL
January 11, 2012	Vegetation Mapping; Wetland Delineation	8:00 A.M. - 4:00 P.M.		GAS
February 14, 2012	Vegetation Mapping; Wetland Delineation	8:00 A.M. - 4:00 P.M.		GAS
March 21, 2012	General Surveys, Habitat Assessments	8:00 A.M. - 4:00 P.M.		GAS
June 29, 2012	General Surveys – Habitat Assessments: Offsite Road Improvement Areas,	8:00 A.M. - 4:00 P.M.		GAS, BP
July 2, 2012	General Surveys – Habitat Assessments: Offsite Road/Utility Improvement Areas,	8:00 A.M. - 4:00 P.M.		GAS, BP
<u>April 10, 2014</u>	<u>LBVI #1</u>	<u>8:00 A.M. – 11:30 A.M.</u>	<u>75–82°F; winds 0–1 mph; clear</u>	<u>GAS</u>
<u>April 21, 2014</u>	<u>LBVI #2</u>	<u>8:00 A.M. - 10:45 A.M.</u>	<u>62–68°F; winds 0–5 mph; clear</u>	<u>GAS</u>
<u>May 1, 2014</u>	<u>LBVI #3</u>	<u>8:00 A.M. - 10:30 A.M.</u>	<u>78–84°F; winds 0–15 mph; cloudy conditions</u>	<u>GAS</u>
<u>May 12, 2014</u>	<u>LBVI #4</u>	<u>7:00 A.M. - 9:00 A.M.</u>	<u>60–76°F; winds 0–10 mph; clear</u>	<u>GAS</u>
<u>May 22, 2014</u>	<u>LBVI #5</u>	<u>7:00 A.M. - 10:00 A.M.</u>	<u>62–64°F; winds 0–1 mph; cloudy conditions</u>	<u>GAS</u>
<u>June 2, 2014</u>	<u>LBVI #6</u>	<u>8:00 A.M. - 10:30 A.M.</u>	<u>65–75°F; winds 0–3 mph; cloudy conditions</u>	<u>GAS</u>
<u>June 11, 2014</u>	<u>LBVI #7</u>	<u>8:00 A.M. - 10:00 A.M.</u>	<u>60–70°F; winds 0–1 mph; clear</u>	<u>GAS</u>
<u>June 23, 2014</u>	<u>LBVI #8</u>	<u>8:00 A.M. - 10:00 A.M.</u>	<u>55–62°F; winds 0–1 mph; cloudy to clear</u>	<u>GAS</u>

Species

CGN = Coastal California gnatcatcher

LBV = Least Bell's vireo

SKR = Stephens' kangaroo rat

Biologists

APF = Alex Fromer; AIB = Anna Bennett; BP = Beth Proscal; EJM = Erin McKinney; GAS = Gerry Scheid; JCL = John Lovio; KOV = Kayo Valenti; MAO = Meagan Olson; PAD = Peter Dolan

of the site as possible. Biological resources observed were noted and mapped according to the County of San Diego's Biological Resource Mapping Requirements (County of San Diego 2010). Vegetation community mapping covered the entire project area and a 100-foot buffer area around the perimeter of the project boundary and the proposed off-site improvement areas.

Floral nomenclature for common plants follows Jepson Online Interchange (2009), for ornamental plants Brenzel (2001), and for sensitive plants California Native Plant Society (CNPS; 2007). Vegetation community classifications follow Holland (1986) as modified by Oberbauer (1996). Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Checklist (1998) and Unitt (2004); for mammals with Baker et al. (2003) and Hall (1981); for amphibians and reptiles with Crother (2001) and Crother et al. (2003); and for invertebrates with Mattoni (1990) and Opler and Wright (1999). Determination of the potential occurrence for listed, sensitive, or noteworthy species is based upon known ranges and habitat preferences for the species (Jennings and Hayes 1994; Unitt 2004; State of California 2007a, 2007b, and 2007c; CNPS 2007; Reiser 2001), species occurrence records from the CNDDDB (State of California 2007d), and species occurrence records from other sites in the vicinity of the survey area.

Limitations on botanical surveys performed come from seasonal factors. General surveys that were conducted during the early spring peak season for all plants also focused on the detection of sensitive plant species. Sensitive annual and perennial species that are more easily identified in the early spring would have been detected during these general surveys. Additional focused rare plant surveys occurred in late spring and early summer to coincide with the peak blooming period of the sensitive plant species listed by the County as having a moderate to high potential for occurrence.

Because the general surveys were performed during the day, limitations to the compilation of a comprehensive wildlife list precluded direct observation of any nocturnal animals.

1.3.3 Focused Surveys

The initial project assessment letter from the County (County of San Diego 2011) recommended focus surveys for some wildlife species and habitat assessments be conducted for other sensitive wildlife species. Focused surveys were conducted for the following sensitive wildlife species: least Bell's vireo (*Vireo bellii pusillus*), coastal California gnatcatcher (*Poliophtila californica californica*), and cactus wren (*Campylorhynchus brunneicapillus couesi*). Habitat assessments were conducted for the following sensitive wildlife species: southwestern willow flycatcher (*Empidonax traillii extimus*), burrowing owl (*Athene cunicularia hypugaea*), Hermes copper butterfly (*Lycaena hermes*), Stephens' kangaroo rat (*Dipodomys stephensi*), and arroyo toad (*Anaxyrus californicus*).

1.3.3.1 Least Bell's Vireo Focused Surveys

Focused surveys for the least Bell's vireo were conducted in suitable habitat areas within the project boundary according to the USFWS protocol (USFWS 2001). ~~Eight-Sixteen~~ surveys were conducted by wildlife biologists, and the dates of the surveys are contained in Table 1. Suitable habitat areas were surveyed on foot with the aid of binoculars during the appropriate time of the day and breeding season. A copy of the post-survey results letters to the USFWS is provided as Attachment 1 to this report. Surveys #9 through #16 were conducted in the northern portion of the project site, covering an approximate 7.4-acre survey area of suitable riparian habitat. This area had not been included in the original surveys because it was not part of the project at that time.

1.3.3.2 Coastal California Gnatcatcher Focused Surveys

Focused surveys for the coastal California gnatcatcher were conducted in suitable habitat areas within the project boundary according to the USFWS protocol (USFWS 1997a). Three surveys were conducted by a permitted wildlife biologist according to the survey protocol (see Table 1). Surveys were conducted on foot with the aid of binoculars and recorded gnatcatcher vocalizations. A copy of the post-survey results letter to the USFWS is provided as Attachment 2 to this report.

1.3.3.3 Cactus Wren Focused Surveys

Focused surveys for the cactus wren were conducted as part of the general wildlife surveys of the site and proposed off-site improvement areas. Surveys were conducted on foot with the aid of binoculars, focusing on suitable habitat areas (i.e., cactus patches). Extra time was spent around the larger patches of cactus on the site to increase the probability of cactus wren observation.

1.3.3.4 Southwestern Willow Flycatcher Habitat Assessment

An assessment of the suitability of riparian habitats within the project boundary to support southwestern willow flycatcher was conducted by a wildlife biologist permitted to survey for this species (see Table 1; Attachment 3). The existing vegetation communities were reviewed prior to conducting field work so that the habitat assessment could focus on potential suitable habitat areas for this species. Suitable habitat was determined by reviewing literature published on the southwestern willow flycatcher (USFWS 2011a; Sogge et al. 2010). Each potential habitat area was visited and evaluated with respect to known habitat conditions used by the species. A determination was made of the potential for the species to occur on the site based on the habitat conditions observed.

1.3.3.5 Burrowing Owl Habitat Assessment

An assessment of suitable habitat areas on the site and proposed off-site improvement areas to support the burrowing owl was conducted within the project area according to the guidelines established by The California Burrowing Owl Consortium (1993) and CDFG (1995). The survey included an assessment of the potential for burrowing owl to occur in areas of suitable habitat within the project area and, where possible, within 500 feet of adjacent off-site areas. Suitable habitat for this project included agricultural fields (active and abandoned) and grassland areas. A report summarizing the results of the burrowing owl habitat assessment is provided in Attachment 4.

1.3.3.6 Hermes Copper Butterfly Habitat Assessment

An assessment of the potential for suitable habitat within the project area and proposed off-site improvement areas to support the Hermes copper butterfly was conducted according to the interim guidelines recommended by the County of San Diego (2010). Areas of native chaparral and coastal sage scrub habitat within the project area were assessed for the presence of the host plant, spiny redberry (*Rhamnus crocea*), in conjunction with nearby nectar plant California buckwheat (*Eriogonum fasciculatum*), during vegetation mapping and general biology surveys.

1.3.3.7 Stephens' Kangaroo Rat Habitat Assessment

An assessment of the potential for suitable habitat within the project site and proposed off-site improvement areas to support the Stephens' kangaroo rat was conducted (Attachment 5). The determination of suitable habitat for this species and the potential for use was based on habitat and species ecological information (USFWS 1988, 1997b). Areas determined to be suitable habitat in the project site were assessed for the potential to support this kangaroo rat species by walking the areas looking for sign (i.e., burrows, tracks, etc.).

1.3.3.8 Arroyo Toad habitat Assessment

The suitability for potential habitat areas in the project area and proposed off-site improvement areas to support the arroyo toad was assessed (Attachment 6) using habitat and species ecological information compiled by the USFWS (2011b). Drainage courses within the project area were visited and associated riparian habitats were assessed for characteristic arroyo toad habitat features. A determination was made as to the likelihood for these areas to support arroyo toads.

1.4 Environmental Setting (Existing Conditions)

The Lilac Hills Ranch project area is part of the inland foothills and valleys of San Diego County. The project area includes topography consisting of a series of rolling hills

dissected by drainage courses and a valley bottom that drain primarily to the south and southwest (see Figure 2). Elevations across the project site range from 930 feet MSL at the highest to 750 feet MSL at the lowest.

Climate conditions for the project area are typical of a Mediterranean climate regime, with a wet winter rainy season followed by a hot, dry summer. Spring and fall months tend to be mild in temperature and variable in rainfall amounts.

The drainage courses on the site convey storm water and urban/agricultural runoff. Both intermittent and ephemeral drainages occur in the project area. Wells occur in scattered locations across the site and are used to provide water to the orchards, vineyards, and other agricultural areas. Two agricultural ponds occur in the project area that store water for irrigation purposes.

Soil types within the project area and vicinity consist of a series of sandy loam, coarse sandy loam, sand, and steep gullied land (U.S. Department of Agriculture [USDA] 1973; SANDAG 1995). Sandy loam and coarse sandy loam soils in the following soil series are present: Bonsall, Cienega, Fallbrook, Greenfield, Placentia, Ramona, Visalia, and Vista (Figure 4). Soils on steeper slopes and in gully bottoms are characterized as steep gullied land. These soil types are derived from weathered and decomposed granite or granodiorite. Runoff is described as moderate to rapid and the erosion hazard is on average moderate for these soil types.

The parcels within the approximately 608 acres of the project area are all privately owned. Two relatively small areas in the project area are encumbered with open space easements. Existing zoning is "limited agriculture" and "rural residential," and the primary land uses found in the project area are agricultural related (i.e., orchards, vineyards, row crops, and nursery operations) and small rural residential development. Land uses on adjacent properties consist of similar agricultural uses.

An Open Space Vacation is proposed for two small open space easements within the project boundary (see Figure 5 for location of the two easements). A discussion of how each finding in accordance with the "County of San Diego, California Board of Supervisors Policy I-103: Open Space Vacations" is provided below.

Policy Number I-103 Open Space Vacations:

1. The proposed open space vacations do not conflict with any of the adopted elements of the County General Plan with respect to location, purpose, and extent. The easements are within a rural setting that is currently under agriculture and outside of the draft future PAMA lands.
2. The two easements are not necessary for present or prospective public use as a public service easement. They are not easements for any road, park, or other public use.

3. The proposed open space vacations comply with CEQA, State, and County guidelines and will not have a significant effect on the environment as appropriate mitigation is being provided.
4. Not applicable, the easements are not for “voluntary reasons” or were they made in “error.”
5. Not applicable. The open space easements are not required as part of lot size averaging/clustering projects and planned developments.
6. The two open space easements were the result of past discretionary actions. The easements lie over land that is currently under agriculture. Preservation of these easements would not further any biological objectives for open space. However, mitigation is being provided that will provide an equal acreage as part of the on-site biological open space.

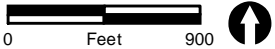
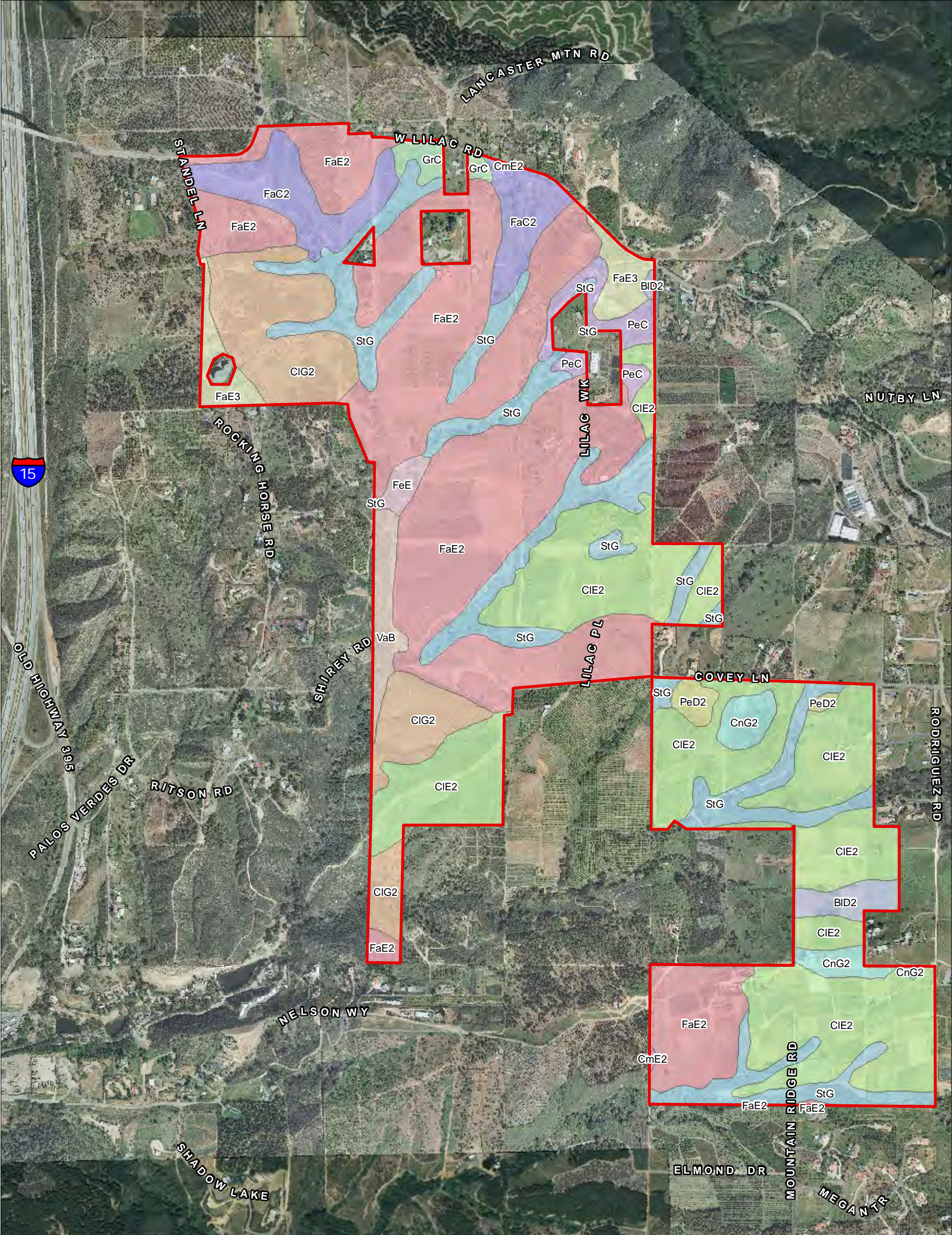
1.4.1 Regional Context

The Lilac Hills Ranch project area is located within the proposed North County Multiple Species Conservation Program (MSCP) area (County of San Diego 2009; see Figure 5). It is outside of and south of the proposed Pre-Approved Mitigation Areas (PAMA) that are located to north (Keys Canyon) and west (I-15 corridor). Proposed MSCP Preserve Areas occur off-site to the east, south, and north, and proposed MSCP Take Authorization Areas occur to the east, but none of these proposed MSCP areas are adjacent to the project area. The project area includes two locations that are covered by relatively small open space easements that occur outside of a PAMA (see Figure 5).

Portions of proposed off-site improvement areas occur within draft PAMA areas. The proposed improvements to West Lilac Road to the west of the project area, improvements to the I-15 on/off ramps at Highway 395, and improvements to on/off ramps at I-15 and Gopher Canyon Road will be within the draft PAMA area along the I-15 corridor. In addition, proposed improvements to Highway 395 between Gopher Canyon and Circle R Drive and a portion of the sewer line alignment within the southern end of Circle R Drive to Highway 395 are within a draft PAMA area.

1.4.2 Habitat Types/Vegetation Communities

Vegetation communities and habitat types that are found in the project survey area, 100-foot survey buffer area, and proposed off-site improvement areas occur as a mosaic of native habitat patches and agricultural uses. Native habitat occurs primarily along the drainage courses and on some of the steeper terrain on the western and southwestern portions of the project area. A total of 17 primary habitat types and vegetation communities were identified in the project survey area and buffer survey area (Figures 6a-c). Some areas of these habitat types/vegetation communities have portions that were characterized as disturbed. Acreages of each habitat type in the project area are given in Table 2.



- Project Boundary

Soil Classification

BID2 - Bonsall sandy loam, 9 to 15 % slopes, eroded

CIE2 - Cieneba coarse sandy loam, 15 to 30 % slopes, ero ded

CIG2 - Cieneba coarse sandy loam, 30 to 65 % slopes, ero ded

CmE2 - Cieneba rocky coarse sandy loam, 9 to 30 % slopes , eroded

CnG2 - Cieneba-Fallbrook rocky sandy loams, 30 to 65 % slopes, eroded

FaC2 - Fallbrook sandy loam, 5 to 9 % slopes, eroded

FaE2 - Fallbrook sandy loam, 15 to 30 % slopes, eroded

FaE3 - Fallbrook sandy loam, 9 to 30 % slopes, severely eroded

FeE - Fallbrook rocky sandy loam, 9 to 30 % slopes

GrC - Greenfield sandy loam, 5 to 9 % slopes

PeC - Placentia sandy loam, 2 to 9 % slopes

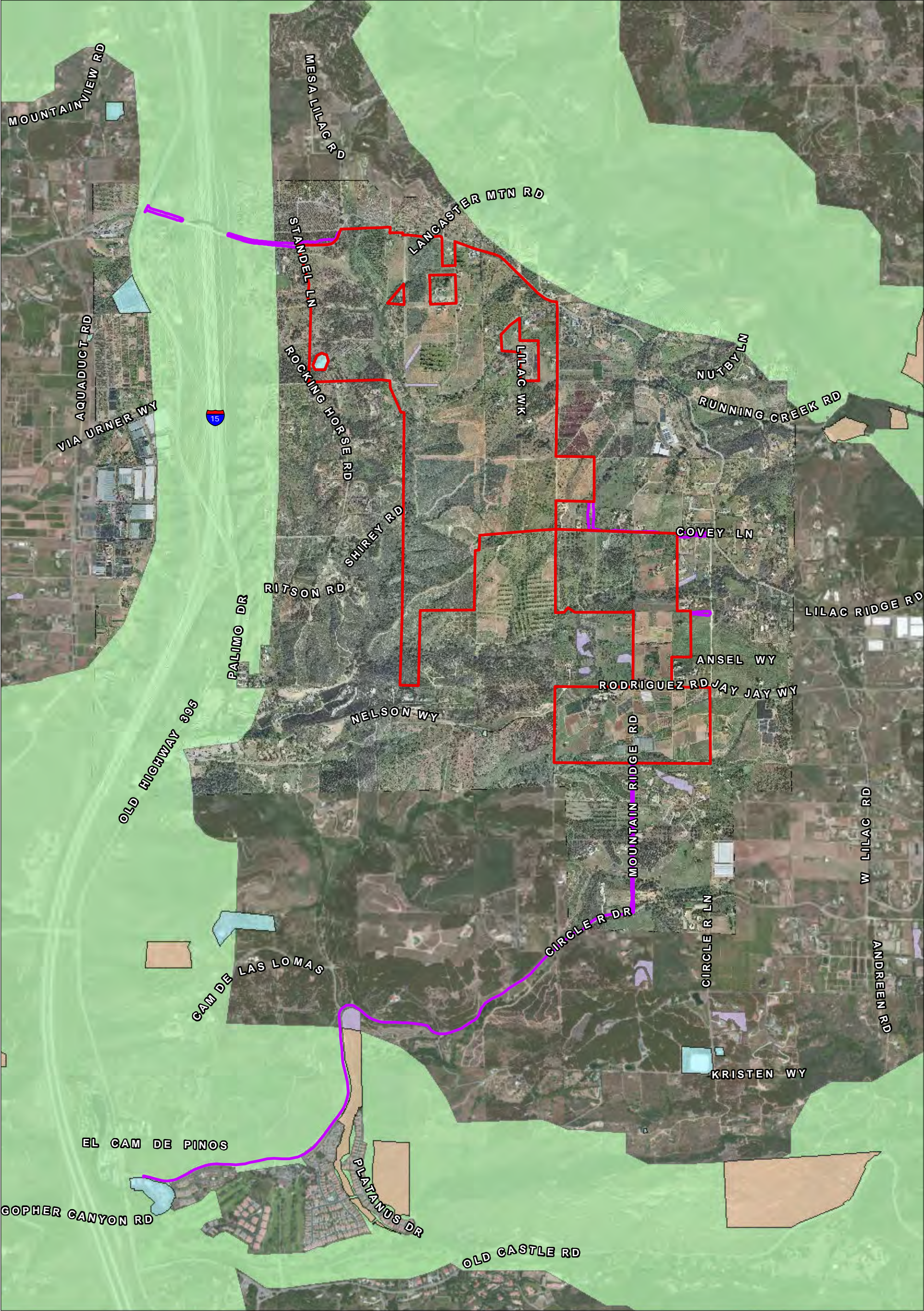
PeD2 - Placentia sandy loam, 9 to 15 % slopes, eroded

StG - Steep gullied land

VaB - Visalia sandy loam, 2 to 5% slopes

FIGURE 4

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- Project Boundary
- Off-site Improvement Areas

- Draft North County MSCP (Not Approved)**
- Open Space Easement outside PAMA
 - Pre-Approved Mitigation Area (PAMA)
 - Preserve Areas
 - Special Districts

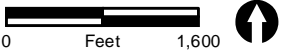


FIGURE 5

Project Area in Relation to Draft North County MSCP
(MSCP Currently Not Approved)

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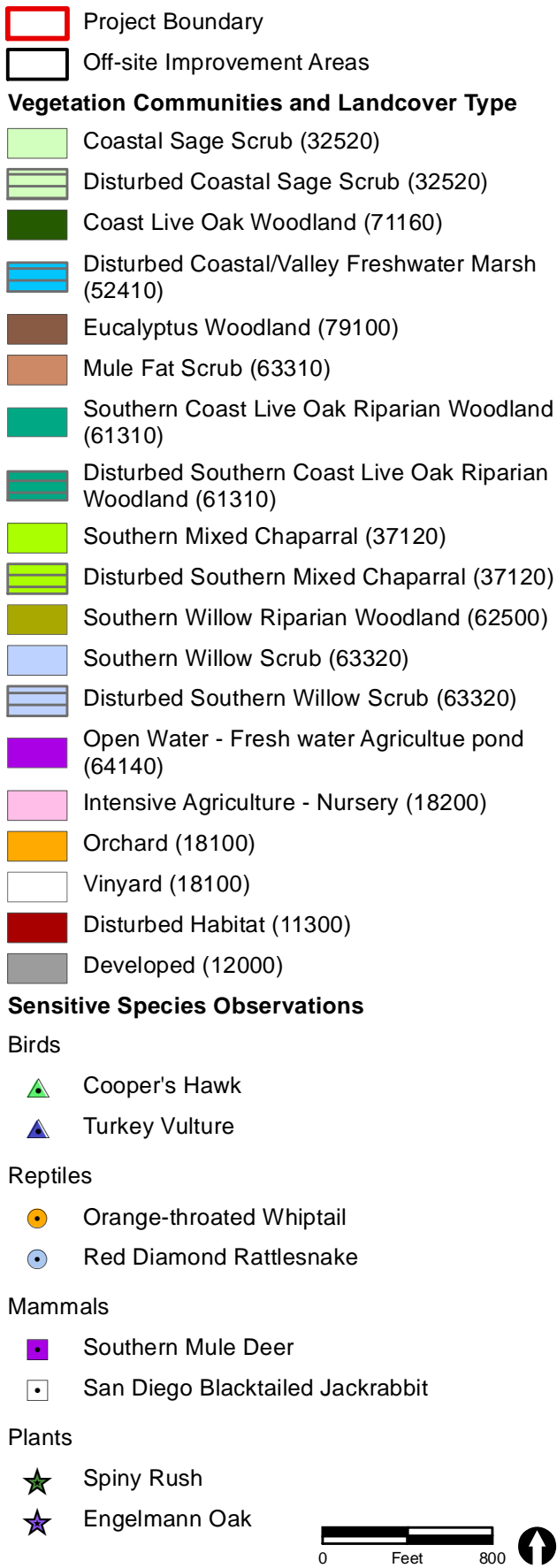
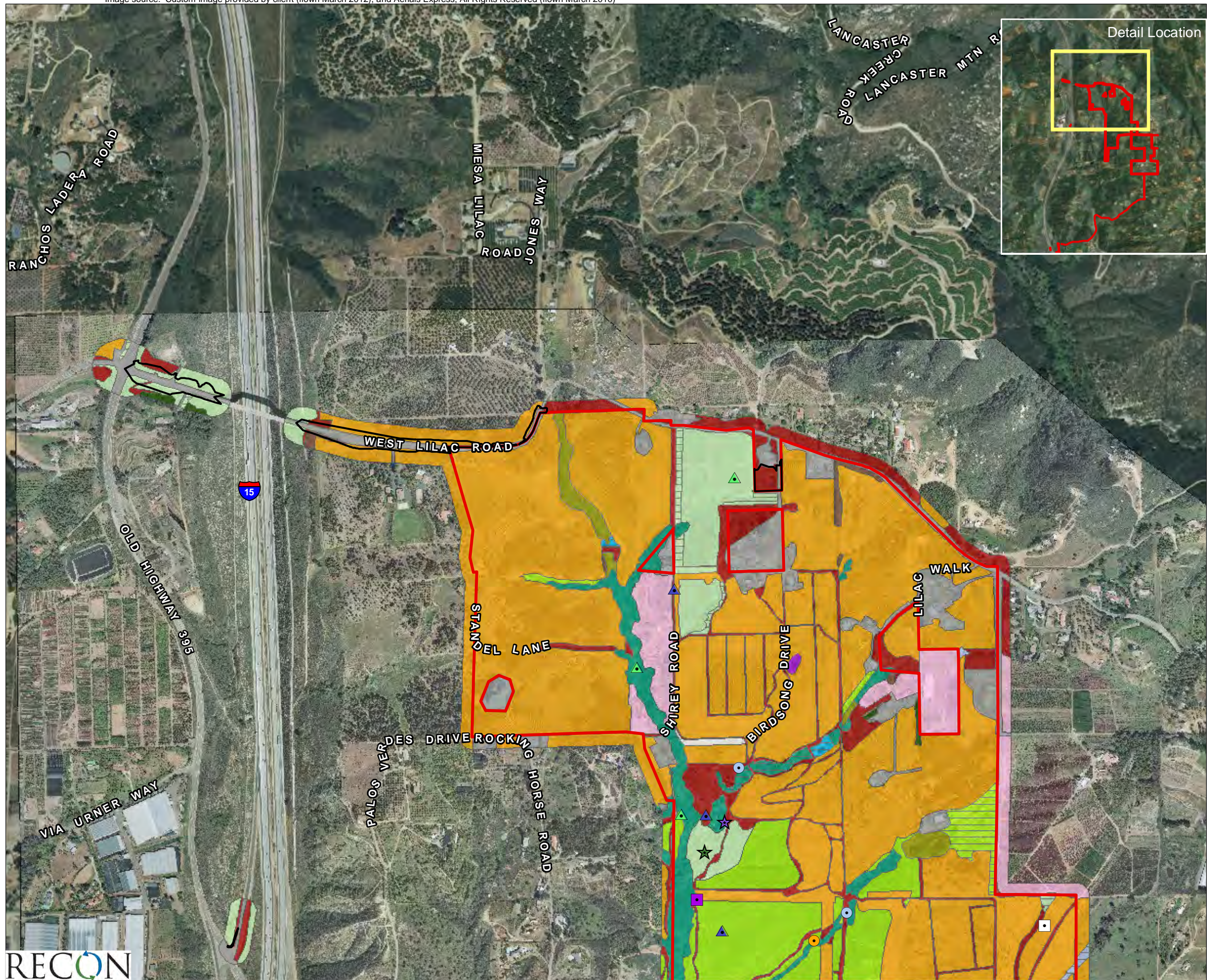


FIGURE 6a

Vegetation Communities/Land Cover Types
and Sensitive Species Locations

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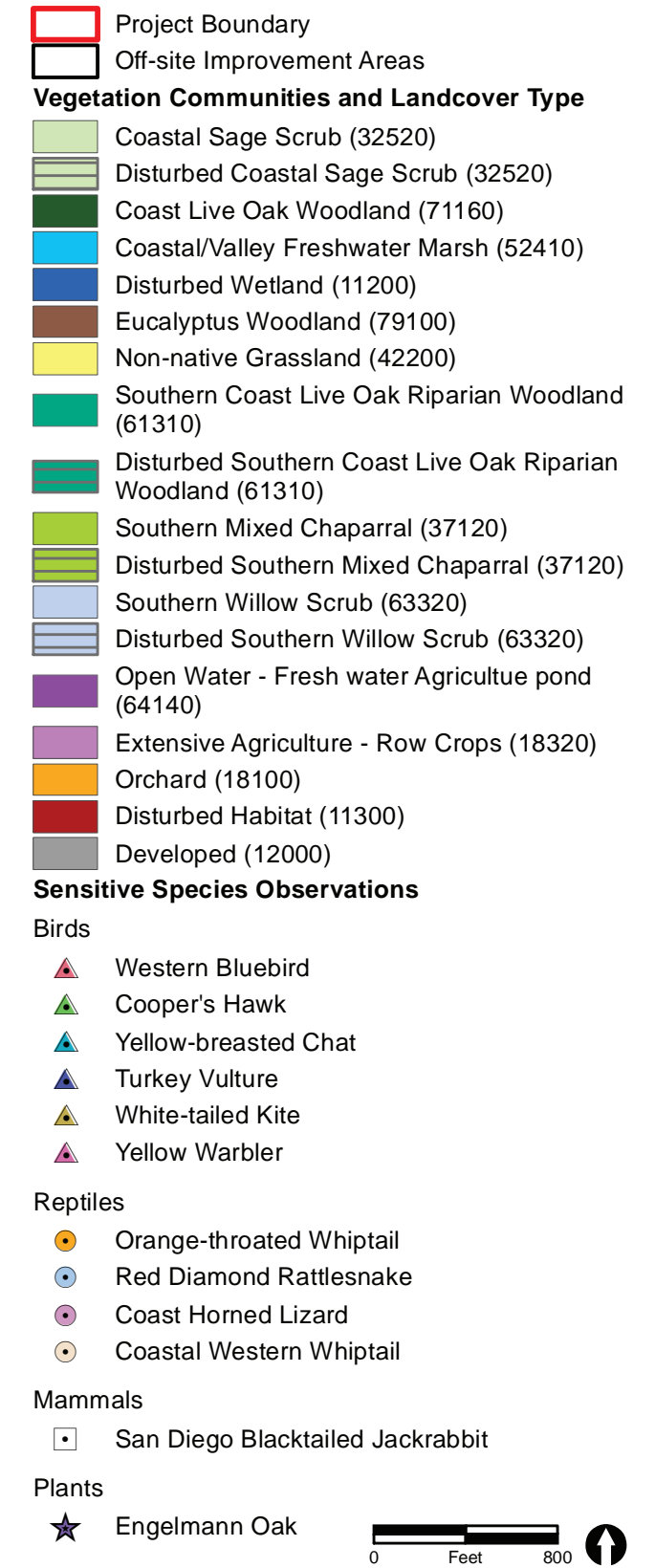
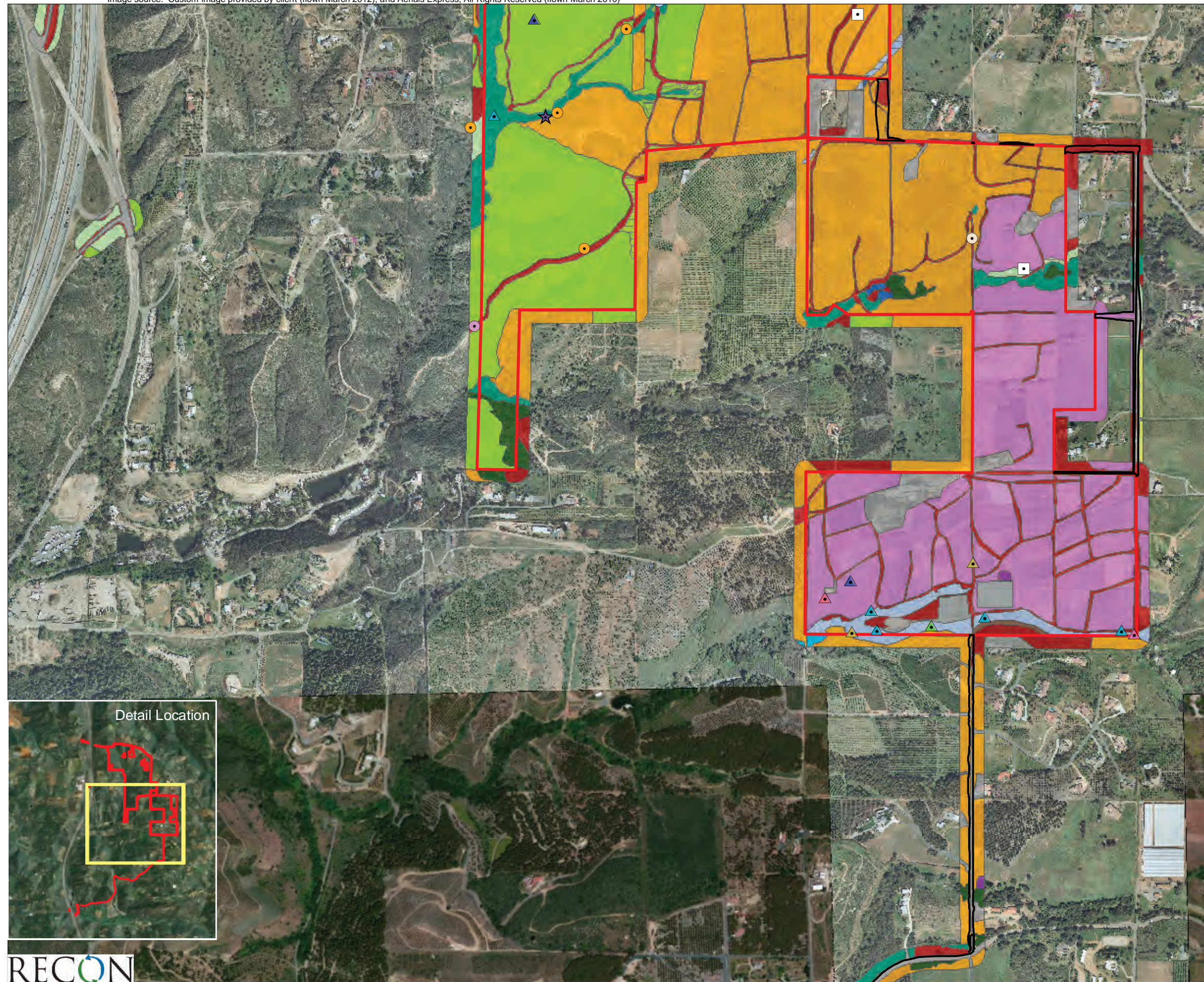
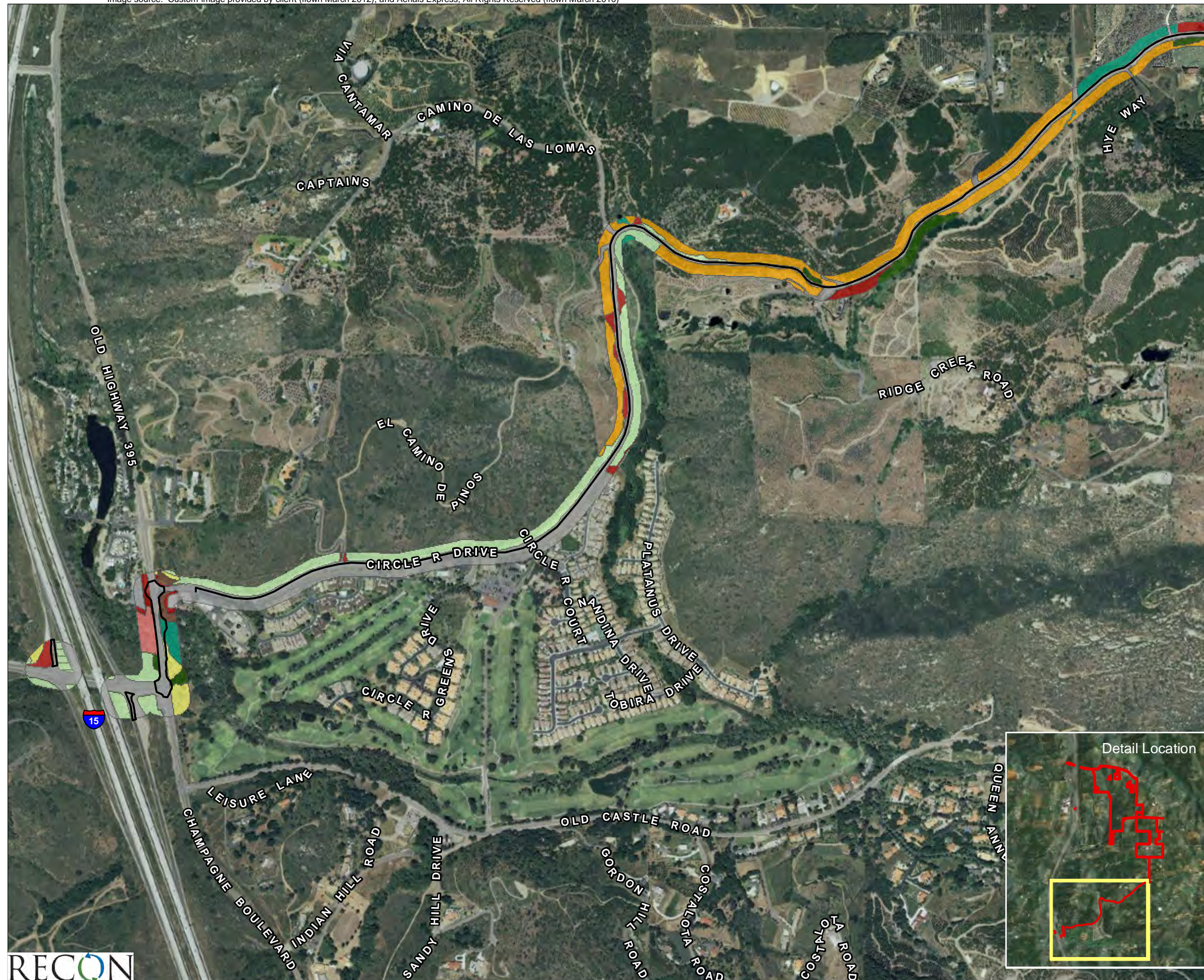


FIGURE 6b

Vegetation Communities/Land Cover Types
and Sensitive Species Locations

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- Off-site Improvement Areas
- Vegetation Communities and Landcover Type**
- Coastal Sage Scrub (32520)
 - Disturbed Coastal Sage Scrub (32520)
 - Coast Live Oak Woodland (71160)
 - Disturbed Coastal/Valley Freshwater Marsh (52410)
 - Eucalyptus Woodland (79100)
 - Non-native Grassland (42200)
 - Southern Coast Live Oak Riparian Woodland (61310)
 - Southern Sycamore Riparian Woodland (62400)
 - Orchard (18100)
 - Disturbed Habitat (11300)
 - Developed (12000)

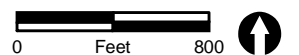


FIGURE 6c

Vegetation Communities/Land Cover Types
and Sensitive Species Locations

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TABLE 2
EXISTING ON-SITE HABITAT/VEGETATION COMMUNITIES

Habitat/Vegetation Communities	Acres
Coast live oak woodland (71160)	3.6
Coastal sage scrub (32520)	19.6
Disturbed coastal sage scrub (32520)	2.9
Disturbed coastal/Valley freshwater marsh (52410)	0.6
Eucalyptus woodland (79100)	1.7
Southern coast live oak riparian woodland (61310)	22.5
Disturbed southern coast live oak riparian woodland (61310)	1.9
Southern mixed chaparral (37120)	75.4
Disturbed southern mixed chaparral (37120)	6.0
Southern willow riparian woodland (62500)	4.7
Southern willow scrub (63320)	6.1
Disturbed southern willow scrub (63320)	0.3
Mule fat scrub (63310)	0.1
Open water – fresh water (64140)	0.5
Disturbed wetland (11200)	0.4
Extensive agriculture – row crops (18320)	90.5
Intensive agriculture – nursery (18200)	9.2
Vineyard (18100)	0.7
Orchard (18100)	291.9
Disturbed habitat (11300)	44.0
Developed (12000)	25.7
TOTAL	608.3

1.4.2.1 Coastal Sage Scrub and Disturbed Coastal Sage Scrub (32520)

Coastal sage scrub vegetation occurs in various sized patches in the on-site project area. The largest patches of relatively undisturbed coastal sage scrub occur in the north and central part of the project area. More disturbed patches of coastal sage scrub vegetation are located in the west-central portion of the project area. Coastal sage scrub vegetation also occurs within the survey area for the proposed off-site improvement areas. It is present adjacent to West Lilac Road to the east and west of I-15, at the intersection of West Lilac Road and Old Highway 395, adjacent to western portion of Circle R Drive, and at the intersection of Gopher Canyon Road and Old Highway 395. Dominant plant species in all coastal sage scrub patches are California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), California buckwheat, and laurel sumac (*Malosma laurina*).

Habitat quality is moderate for the relatively undisturbed patches of coastal sage scrub on-site because of relatively small acreage, edge effects, and the isolation of these areas from contiguous undisturbed native vegetation. Habitat quality for disturbed

patches of coastal sage scrub on-site is considered low due to the continued maintenance of the vegetation by the property owners (i.e., fuel management). The habitat quality of the coastal sage scrub habitat adjacent to West Lilac Road, Circle R Drive, and at Gopher Canyon Road/Old Highway 395 is generally high further away from the road; however, the vegetation closest to these roads is more disturbed due to edge effects.

1.4.2.2 Southern Mixed Chaparral and Disturbed Southern Mixed Chaparral (37120)

Southern mixed chaparral vegetation occurs as a large, relatively undisturbed patch in the project area. This vegetation community occurs in the central and southern portions of the project area on the western-facing slopes. Disturbed areas of southern mixed chaparral are mapped along the edges of the larger patches. Vegetation in these disturbed areas is maintained as part of fuel breaks, access roads, and areas being maintained as agriculture. Dominant plant species include chamise (*Adenostoma fasciculatum*), mission manzanita (*Xylococcus bicolor*), hoary-leaved ceanothus (*Ceanothus crassifolius*), black sage, California buckwheat, and laurel sumac.

The habitat quality of the undisturbed southern mixed chaparral on-site is moderate to high, as the vegetation remaining is in a large contiguous patch of chaparral that connects to native chaparral areas off-site to the southwest. The dense cover of native shrubs contains a diverse assemblage of chaparral species. Disturbed areas of southern mixed chaparral have low to moderate habitat values. Areas that are being maintained as agriculture have fewer native plant species and thus low habitat values. Southern mixed chaparral maintained as part of fuel breaks have more species recovering between disturbances, but the diversity of shrub species is less in these areas.

Southern mixed chaparral is not considered a RPO sensitive habitat unless it supports a sensitive species.

1.4.2.3 Coast Live Oak Woodland (71160)

Coast live oak woodland occurs in relatively small patches in the on-site project area. The largest area of coast live oak woodland occurs in the southwestern portion of the project site on a north-facing slope above a small, narrow canyon. Smaller patches of coast live oak woodland occur within orchards and agricultural areas. A disturbed area of this habitat type was mapped in the southwestern part of the site, where the oak woodland is recovering from past agricultural practices that have been abandoned. The coast live oak woodland present within the off-site improvement survey areas is located to the south of West Lilac Road and east of I-15, in small patches to the east and west of the southern part of Mountain Ridge Road, along the south side of the eastern half of Circle R Drive, and east and west of Old Highway 395 north of Gopher Canyon Road. The dominant plant species is the coast live oak tree (*Quercus agrifolia*). Vegetation

growing beneath the oak tree canopy varies from non-native grasses in the disturbed patches to dense to open areas of native shrubs such as poison oak (*Toxicodendron diversilobum*) and mule fat (*Baccharis salicifolia*) in the undisturbed patches.

The habitat quality of the coast live oak woodland that occurs in the disturbed patches and orchards or adjacent to agricultural areas is low to moderate as the small groupings of oak trees provide some habitat, but these areas lack a native understory. The coast live oak woodland on the north-facing slope in the southwestern part of the site has relatively high habitat values due to the location of the habitat adjacent to native riparian areas in the canyon below and an understory composed of native plant species. The coast live oak woodland to the south of West Lilac Road and adjacent to Old Highway 395 north of Gopher Canyon Road is of moderate quality due to its proximity to development and existing roads. Oak woodland habitat adjacent to Circle R Drive and Mountain Ridge Road has relatively low habitat values due to their proximity to agriculture (i.e., orchards).

Coast live oak woodland is not considered a RPO sensitive habitat type.

1.4.2.4 Eucalyptus Woodland (79100)

A small, narrow stand of eucalyptus trees (*Eucalyptus* spp.) occurs in the extreme northeast portion of the on-site project area. The trees were planted adjacent to West Lilac Road and an access road along a property boundary. Small stands of eucalyptus trees also occur within the off-site improvement survey area to the south of West Lilac Road east of I-15 and at the intersection of Circle R Drive and Old Highway 395. The eucalyptus trees form relatively small woodlands that have low to moderate habitat values due to its proximity to roads and the potential to be used by raptor and other bird species for roosting and nesting. Eucalyptus woodland is not considered a RPO sensitive habitat.

1.4.2.5 Disturbed Coastal/Valley Freshwater Marsh (52410)

A relatively small area of coastal/valley freshwater marsh occurs upstream of a dirt road crossing of a drainage that supports mainly oak riparian woodland in the northeast portion of the site. The area is described as disturbed due to the heavy infestation of pampas grass (*Cortaderia* sp.). Cattail (*Typha latifolia*) and umbrella sedge (*Cyperus esculentus*) persist among the pampas grass. A second area of coastal/valley freshwater marsh occurs upstream of an impoundment created by a road crossing in the northwestern portion of the site. This pond supports a few scattered patches of cattail.

The habitat value for the freshwater marsh area associated with the oak woodland is low due to the predominance of pampas grass, but could be improved with eradication of the non-native plant species. When the freshwater marsh area is considered in conjunction

with the oak riparian woodland of the drainage course, the overall habitat value would be moderate, as the marsh adds diversity to the adjacent woodland areas.

Habitat values for the impoundment pond are moderate due to the sparse native vegetation, small acreage, and water levels that fluctuate. Wildlife species likely use this pond as a supplemental water source. This pond is part of a natural drainage course and is considered a jurisdictional wetland. The pond is also considered a RPO wetland with moderate biological function or value as a wetland.

Coastal/valley freshwater marshes are wetlands and are also considered a category of RPO wetland. Wetlands, in general, are also considered sensitive resources under the jurisdiction of federal (U.S. Army Corps of Engineers [USACE]) and state (CDFG, Regional Water Quality Control Board [RWQCB]) agencies.

1.4.2.6 Southern Coast Live Oak Riparian Woodland and Disturbed Southern Coast Live Oak Riparian Woodland (61310)

Southern coast live oak riparian woodland on-site is the predominant vegetation community supported by the larger intermittent drainages and the main tributaries to these larger drainages in the project area. This riparian woodland vegetation community occurs along most of the western border of the main project area and along tributary east-west drainages in the central portions of the site. One area of southern coast live oak riparian woodland was characterized as disturbed due to the predominance of pampas grass in the understory along a tributary drainage in the northern portion of the site. This riparian woodland habitat occurs within the off-site improvement survey area to the north of Circle R Drive near its intersection with Mountain Ridge Road and at the hairpin turn near the central portion of Circle R Drive. The dominant plant species in this riparian woodland include coast live oak, red willow (*Salix laevigata*), black willow (*Salix gooddingii*), poison oak, and wild grape (*Vitis girdiana*).

Overall habitat values for the southern coast live oak riparian woodlands areas on and off the site are high. The mature coast live oak and willow trees form tree layer with an understory of native shrubs and herbaceous species. Wild grape forms a dense covering of the riparian vegetation during the spring and summer months. This riparian woodland habitat supports a diverse bird population, including different raptor species, as well as, a variety of insects, reptiles, and mammals.

Southern coast live oak riparian woodlands are wetlands and are considered a category of RPO wetlands that also fall under the jurisdiction of federal (USACE) and state (CDFG, RWQCB) resource agencies.

1.4.2.7 Southern Willow Scrub and Disturbed Southern Willow Scrub (63320)

Southern willow scrub vegetation occurs in the extreme southern portion of the site and as part of the smaller out-lying project area to the west. It is associated with portions of the larger, intermittent drainage courses in these areas. A narrow strip of disturbed southern willow scrub occurs along a drainage course in the east-central part of the site where the drainage course is affected by agricultural activities that have cleared the understory and reduced the density of willow cover. Dominant plant species in this vegetation community include red willow, black willow, arroyo willow (*Salix lasiolepis*), narrow-leaved willow (*Salix exigua*), and mule fat.

Overall habitat values for the southern willow scrub in the extreme southern part of the site are moderate due to edge effects associated with the agricultural activities adjacent to the drainage course and the relatively narrow width of the willow scrub habitat. The smaller patch of willow scrub habitat on the outlying project area to the west has moderate habitat values due to edge effects from adjacent homes. Both of these areas support a diverse assemblage of bird species. Insects, reptiles, and mammals also use these riparian areas.

Southern willow scrub areas are wetlands are also considered a category of RPO wetland. Wetlands, in general, are also considered sensitive resources under the jurisdiction of federal (USACE) and state (CDFG, RWQCB) agencies.

1.4.2.8 Mule Fat Scrub (63310)

Mule fat scrub vegetation onsite occurs as a small patch in an intermittent drainage course near the eastern part of the project. A narrow strip of mule fat scrub occurs along a drainage course that is affected by adjacent agricultural activities. The strip of vegetation is made up of a pure stand of mule fat shrubs.

Overall, the habitat value for the mule fat scrub is low due to edge effects associated with the agricultural activities adjacent to the drainage course and the relatively narrow width of the mule fat scrub habitat. It is anticipated that the mule fat scrub supports a limited assemblage of bird species, insects, reptiles, and perhaps small mammals.

Mule fat scrub areas are wetlands that can be considered a category of RPO wetland. Wetlands, in general, are also considered sensitive resources under the jurisdiction of federal (USACE) and state (CDFG, RWQCB) agencies.

1.4.2.9 Southern Willow Riparian Woodland (62500)

Southern willow riparian woodland vegetation occurs in the extreme northwestern portion of the site. It is associated with portions of the larger, intermittent drainage course in this area. The southern willow riparian woodland occurs adjacent to orchards.

Dominant plant species in this vegetation community include red willow, black willow, arroyo willow (*Salix lasiolepis*), narrow-leaved willow (*Salix exigua*), and mule fat.

Overall habitat values of for the southern willow riparian woodland are moderate due to edge effects associated with the agricultural activities adjacent to the drainage course and the narrow width of the willow woodland habitat. This area supports a diverse assemblage of bird species. Insects, reptiles, and mammals likely also use these riparian areas.

Southern willow riparian woodland areas are wetlands and are also considered a category of RPO wetland. Wetlands, in general, are also considered sensitive resources under the jurisdiction of federal (USACE) and state (CDFG, RWQCB) agencies.

1.4.2.10 Disturbed Wetland (11200)

A relatively small area of disturbed wetland occurs along a drainage course within an orchard in the south-central part of the project area. The disturbed wetland is located upstream of an existing wall that functions to temporarily detain water at this location. The herbaceous wetland vegetation that grows in the area of detention is characterized as disturbed due to it being periodically mowed as part of the vegetation maintenance activities associated with the orchard. Dominant plant species at this location include curly dock (*Rumex crispus*), bristly ox tongue (*Picris echioides*), and water cress (*Nasturtium officinale*).

The habitat value of this wetland area is low due to the regular vegetation disturbance that occurs. Non-native species have invaded the area and further degrade the habitat values. Disturbed wetlands would be considered RPO wetlands in some circumstances.

1.4.2.11 Open Water – Freshwater (64140)

Two man-made agricultural ponds occur within the project boundary and are characterized as open water habitat. These ponds were created to store water for agricultural purposes. One man-made pond is located in the southern portion of the site within active agricultural fields used for row crops. This pond supports a narrow band of salt cedar (*Tamarix ramossissima*) on its relatively steep banks. The other agricultural pond is located in the northern portion of the site within orchards. Little vegetation grows around this pond. One man-made agricultural pond occurs within the off-site survey area to the east of Mountain Ridge Road. This pond has no vegetation associated with it.

Habitat values for the two on-site and one off-site agricultural ponds are low due to the lack of native vegetation, small acreage, and water levels that fluctuate. Wildlife species likely use these ponds as a supplemental water source. These three ponds are man-made and were not considered jurisdictional wetlands. The ponds were not considered RPO wetlands because they are man-made, have negligible biological function or value

as a wetland, 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 species.

1.4.2.12 Disturbed Habitat (11300)

Disturbed habitat was used to characterize areas in the on-site project area and off-site improvement survey areas where more or less permanent disturbances will inhibit the growth of native vegetation. The designation was used primarily to distinguish the many roads that bisect the site, as well as areas adjacent to orchards or agricultural fields where equipment is stored or the vegetation is maintained as part of the agricultural operation (i.e., wells, mulch areas). These areas are mostly devoid of vegetation, but some of the disturbed areas near agricultural areas may occasionally support a growth of non-native annual species such as slender wild oat, black mustard, star-thistle, and pigweed (*Chenopodium album*).

Habitat values for disturbed areas are considered low due to the lack of native vegetation. Areas mapped as disturbed habitat are not considered RPO sensitive habitat.

1.4.2.13 Agricultural Areas

Large acreages of the on-site project area and off-site improvement survey areas are used for various agricultural purposes. Agricultural lands cover the majority of the southeastern, east-central, and northern portions of the project area. Some limited patches of native vegetation may remain in some areas, usually associated with drainage courses. Agricultural types mapped in the project area include the following: Extensive Agriculture – Row Crops (18320); Intensive Agriculture – Nursery (18200); Orchard (18100); and Vineyard (18100). Areas used for row crops occur in the southeastern portion of the site. Various food and nursery crops are grown on these lands. Orchards throughout the site are used to cultivate various varieties of citrus and avocado. The small area of mapped vineyard supports varieties of grape. An area used to produce stock for the commercial nursery business is located near the northwest part of the site.

Habitat values for areas used for row crops, vineyards, and nurseries are generally low due to the lack of native vegetation and continual disturbance of the land. Mature orchards have moderate habitat values as the dense tree canopy provides habitat used by raptors and other birds. Fruit dropped by the trees likely provides a food source for insects, birds, and mammals. These agricultural areas are not considered RPO sensitive habitats from a biological perspective.

1.4.2.14 Developed (12000)

Areas mapped as developed occur as relatively small areas scattered throughout the on-site and off-site survey areas. This designation was used for locations where existing or abandoned home sites occur and the vegetation is largely ornamental (i.e., lawns, exotic trees, landscaped areas). These areas have low habitat values due to the lack of native vegetation and proximity to areas regularly used by humans. Developed areas, when considered a subset of disturbed lands, are not RPO sensitive lands.

1.4.3 Flora

The Lilac Hills Ranch project area contains a diverse mixture of native and non-native plant species. Native plants occupy the riparian woodlands, coastal sage scrub, mixed chaparral, oak woodland, and wetland habitats on-site. Non-native plants are mostly found in and adjacent to the disturbed areas that include agricultural fields, orchards, cleared areas, and developed portions of the site. A total of 229 plant species were identified in the project area (Attachment 7). This total does not include most of the ornamental and agricultural plants observed in developed areas, planted in fields, or in orchards. Of the total number of plants listed in Attachment 7, 145, or approximately 63 percent, are native to California, and 84 are non-native to California.

The most common native plant species found on the site include coast live oak, California sagebrush, chamise, hoaryleaf ceanothus (*Ceanothus crassifolius*), mission manzanita, red willow, and arroyo willow. The species diversity of native plants is highest in the southern coast live oak riparian forest and southern mixed chaparral vegetation communities in the project area.

1.4.4 Fauna

The habitats in the project area support a diverse assemblage of wildlife species (Attachment 8). Bird species were the most commonly observed animals, with 59 different species being identified. Invertebrates were the next most common wildlife species observed, with 18 different species identified. Three amphibian species and 10 reptile species were found in the project area. Mammals detected or observed on the site include four species of small mammals (i.e., rabbits, squirrels, woodrats) and three species of larger mammals (i.e., deer, raccoon, and coyote).

The southern coast live oak riparian woodland, southern willow scrub, coastal sage scrub, and southern mixed chaparral provide the best habitat for the majority of the wildlife species observed in the project area. Raptor species (e.g., hawks) were also commonly observed in the orchard trees. Pacific tree frogs (*Pseudacris regilla*) were most common along the intermittent drainage courses and freshwater marsh areas, while the bullfrog (*Lithobates catesbeiana*) was only observed in the deeper agricultural ponds on-site. Reptile species (i.e., lizards, snakes) and small and large mammals were

most common in the coastal sage scrub, mixed chaparral, riparian woodland, and riparian scrub areas.

1.4.5 Sensitive Plant Species

Eleven sensitive plant species were identified as having the potential to occur on the site (County of San Diego 2011; Attachment 9). Of these 11 species, 3 were observed in the project area, while the remaining species on the list were considered to have a low or moderate (one species) potential for occurrence. CNDDDB forms for those species observed are in provided in Attachment 10.

Prostrate spineflower (*Chorizanthe procumbens*) is not a state or federally listed species and is no longer a ranked species by CNPS due to it being too common, but is currently on List D of the County sensitive species list. The prostrate spineflower has a wide range and is found in many areas of the local San Diego region (Reiser 2001). This spineflower species was observed on-site in low numbers (<100 individuals) relative to the local north county populations and intermixed with a more common species of spineflower (*C. fimbriata*) that occurs in larger numbers. Prostrate spineflower was observed in openings within and along fuel breaks adjacent to southern mixed chaparral habitat on-site. Locally, this population may be important to the overall species diversity of the southern mixed chaparral on-site, but the population numbers do not appear to be great enough to consider this location a significant regional population given the abundance and wide range of this species within the San Diego region.

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) is not a state or federally listed species. CNPS ranks this species a 4.2, and the County places the species on List D. This species is common in marshes in coastal San Diego County and in inland areas where water can pond along drainages (Reiser 2001). Approximately 20 individuals of southwestern spiny rush were observed in a drainage course on the site (see Figure 6a). There is the potential for additional individuals of this species to occur in the riparian woodlands in the project area that were inaccessible. This small population of southwestern spiny rush contributes to the local species diversity of the habitats on-site, but the population numbers do not appear to be great enough to consider this location a significant regional population considering the broad north county distribution and abundance.

Engelmann oak (*Quercus engelmannii*) is not a state or federally listed species, but it is a CNPS rank 4.2 species and on List D with the County of San Diego. This species is relatively abundant in the San Diego region, and commonly found in the mountainous inland areas of eastern San Diego County and occasionally in other north-coastal areas (Reiser 2001). Three Engelmann oak trees were observed on the site associated with coast live oak riparian woodlands (see Figures 6a,b). These three trees add to the local species diversity of the riparian woodlands on-site, but the population numbers are too

low to consider this a significant regional population of the species given the countywide abundance of this species.

1.4.6 Sensitive Animal Species

Fifty-one sensitive wildlife species were identified as having the potential to occur on the site (County of San Diego 2011; Attachment 11). Of these 51 species, 13 were observed in the project area; of the remaining species on the list, one species not observed on-site has a high potential for occurrence, and the rest of the species have a moderate or low potential for occurrence. CNDDDB forms for those species observed are provided in Attachment 10.

Sensitivity of wildlife species is based on rankings and listings by federal, state, and local resource agencies. These codes and listings for each sensitive wildlife species addressed in this report are shown in Attachment 11.

1.4.6.1 Species Observed

Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*) – This lizard species is considered a Federal Species of Concern, a Species of Special Concern by CDFG, is on the Group 2 Species list for the County of San Diego, and is a covered species under the MSCP. Six separate observations of Belding's orange-throated whiptail were made on-site; two near coast live oak riparian woodland, three near disturbed coastal sage scrub, and near southern mixed chaparral habitat (see Figures 6a,b). Habitats in the project area are likely to support additional individuals of this reptile species. However, given the relatively wide range of this lizard in San Diego County (Lemm 2006), these locations do not represent a significant regional population.

Coastal whiptail (*Aspidoscelis tigris stejnegeri*) - This lizard species is considered a Federal Species of Concern, is on the Group 2 species list for the County of San Diego, and will be a covered species under the MSCP. One individual of coastal whiptail was observed on-site in an orchard adjacent to coast live oak riparian woodland (see Figures 6a,b). Habitats in the project area are likely to support additional individuals of this reptile species. However, given the relatively wide range of this lizard in San Diego County (Lemm 2006), this observation does not represent a significant regional population.

Red diamond rattlesnake (*Crotalus ruber*) – This rattlesnake species is considered a Federal Species of Concern, a Species of Special Concern by CDFG, is on the Group 2 Species list for the County of San Diego, and is a covered species under the MSCP. Two individuals of red diamond rattlesnake were observed on-site at two separate locations (see Figures 6a,b). One sighting of this rattlesnake was within coast live oak riparian woodland, and the other was made in an open area adjacent to southern mixed chaparral. Habitats in the project likely support additional individuals of this snake

species; however, given the relatively wide range of this reptile in San Diego County (Lemm 2006), these locations do not represent a significant regional population.

Cooper's hawk (*Accipiter cooperii*) – The Cooper's hawk is considered a Watch List species by CDFG and is on the Group 1 list with the County of San Diego. Four individuals of this raptor species were observed on-site. The species was observed using coast live oak riparian woodland, orchards, and coastal sage scrub. Given the relatively wide range of this bird species in San Diego County (Unitt 2004), these locations do not represent a significant regional population.

White-tailed kite (*Elanus leucurus majusculus*) – A pair of white-tailed kites were commonly seen using the southern willow scrub and adjacent agricultural fields and orchards in the southern portion of the site (see Figure 6b). This species is considered a California Fully Protected Species by CDFG for nesting areas and is a Group 1 species on the County of San Diego list. While no nests were observed, breeding behaviors were observed during the spring. Given the relatively wide range of this bird species in San Diego County (Unitt 2004), this location does not represent a significant regional population.

Turkey vulture (*Cathartes aura*) – Turkey vultures were commonly observed flying overhead across much of the site. A group of four individuals of this species were observed roosting in a young orchard on one occasion. This species is listed on Group 1 of the County of San Diego. Turkey vultures are commonly seen in San Diego County (Unitt 2004); therefore, the population in the vicinity of the project area does not represent a significant population of the species.

Loggerhead shrike (*Lanius ludovicianus grinnelli*) – The loggerhead shrike is a Species of Special Concern under CDFG and is listed as a Group 1 species in the County of San Diego. One individual of this bird species was observed in an orchard adjacent to southern mixed chaparral on-site (see Figures 6a,b). Other areas of suitable habitat occur in the project area that could support the loggerhead shrike. Given the relatively wide range of this bird species in San Diego County (Unitt 2004), this location does not represent a significant regional population.

Western bluebird (*Sialia mexicana occidentalis*) – The western bluebird is listed as a Group 2 species by the County of San Diego. One individual of this species was observed within southern mixed chaparral on-site (see Figures 6a,b). Other areas of suitable habitat occur in the project area that could support the western bluebird. Given the relatively wide range of this bird species in San Diego County (Unitt 2004), this location does not represent a significant regional population.

Yellow warbler (*Setophaga [=Dendroica] petechia*) – This bird species is considered a Species of Special Concern under CDFG and is listed as a Group 2 species in the County of San Diego. Nesting sites for the yellow warbler are of particular concern. One

yellow warbler was observed in coast live oak riparian woodlands habitat on-site (see Figures 6a,b). Other areas of riparian woodland and scrub on-site provide additional habitat for this species to occur. Given the relatively wide range of this bird species in San Diego County (Unitt 2004), this location does not represent a significant regional population.

Yellow-breasted chat (*Icteria virens auricollis*) – Five yellow-breasted chat individuals were observed on-site within coast live oak riparian woodland and willow scrub habitats (see Figures 6a,b). This bird species is considered a Species of Special Concern under CDFG and is listed as a Group 1 species in the County of San Diego. Nesting sites for the yellow-breasted chat are of particular concern. Given the relatively wide range of this bird species in San Diego County (Unitt 2004), this location does not represent a significant regional population.

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) – This rabbit species is a Federal Species of Concern, a Species of Special Concern under CDFG, and is in Group 2 for the County of San Diego. Two individuals of San Diego black-tailed jackrabbit were observed near coastal sage scrub and agricultural areas on-site. Suitable habitat for this species occurs in the project area, but on-site populations may be effected by agricultural pest control measures. Given the relatively wide range of this rabbit species in San Diego County (Jameson and Peeters 2004), this location does not represent a significant regional population.

San Diego desert woodrat (*Neotoma lepida intermedia*) – Nests/homes of the San Diego desert woodrat were relatively common in the undisturbed coastal sage scrub and southern mixed chaparral vegetation on-site. A few nests were also observed on the margins of coast live oak riparian woodland habitat. The San Diego desert woodrat is considered a Federal Species of Concern, a Species of Special Concern under CDFG, and is on the Group 2 County of San Diego list. Given the relatively wide range of this woodrat species in San Diego County (Jameson and Peeters 2004), this location does not represent a significant regional population.

Southern mule deer (*Odocoileus hemionus fuliginata*) – The southern mule deer is a large mammal species that occurs on the Group 2 list for the County of San Diego. This species is common and abundant in forests, brush fields, and meadows in California, including San Diego County (Jameson and Peeters 2004). A group of three mule deer were observed on-site in an open area adjacent to southern mixed chaparral. The riparian woodlands, coastal sage scrub, and southern mixed chaparral vegetation on-site provides habitat to support a small mule deer population, but overall presence of mule deer in the project area could be effected by human activities and their pets such as agricultural, residences, and domestic dogs.

1.4.6.2 Species with High Potential to Occur

Coast horned lizard (*Phrynosoma coronatum blainvillii*) – This horned lizard subspecies is considered a Federal Species of Concern, a Species of Special Concern by CDFG, and is on the Group 2 list for the County of San Diego. One individual of coast horned lizard was observed just off-site in the southwestern portion of the project site in an open area adjacent to southern mixed chaparral (see Figures 6a,b). This species has a high potential to occur on-site due to the proximity of the initial sighting to the site and the presence of suitable habitat in the project area. This species prefers undisturbed areas of grassland, sage scrub, chaparral, oak woodland, riparian woodland, pinyon-juniper woodland, and coniferous forest (Lemm 2006). Such habitat on-site is limited, and therefore, the site likely does not support a significant regional population of this lizard species.

1.4.7 Wetlands/Jurisdictional Waters

A routine wetland delineation, following the guidelines set forth by USACE (1987, 2008), was performed to gather field data at potential jurisdictional waters in the survey area. The extent of USACE jurisdictional waters was delineated by the ordinary high water mark in addition to any adjacent wetland areas. State waters/wetlands and County RPO wetlands were also delineated. The extent of these wetlands was delineated by the lateral limits of the bed and bank in addition to the lateral limits of the riparian canopy. The results of the jurisdictional waters/wetland delineation conducted for the project is summarized below from the jurisdictional delineation report (Attachment 12).

Acreages of jurisdictional waters for each of the different jurisdictions are provided in Table 3. Figures 7a,b, 8a,b, and 9a,b show the locations of the jurisdictional waters identified on-site for each agency jurisdiction.

TABLE 3
EXISTING JURISDICTIONAL WATERS WITHIN THE PROJECT SITE
(acres)

Jurisdictional Waters	Total
USACE Jurisdiction	
Non-wetland waters of the U.S.	4.69
Wetlands	13.44
USACE Total Jurisdiction	18.13
CDFG/RWQCB Jurisdiction ¹	
Streambed	4.18
State Wetlands (Riparian habitat)	39.35
CDFG Total Jurisdiction¹	43.52
County of San Diego RPO Wetlands	37.64

¹CDFG/RWQCB area of jurisdiction overlaps all USACE jurisdictional waters.

The dominant plant species found in the wetland habitats on-site are composed of willow species (black, arroyo, red, and narrow-leaved), cattail, mule fat, water cress, and wild

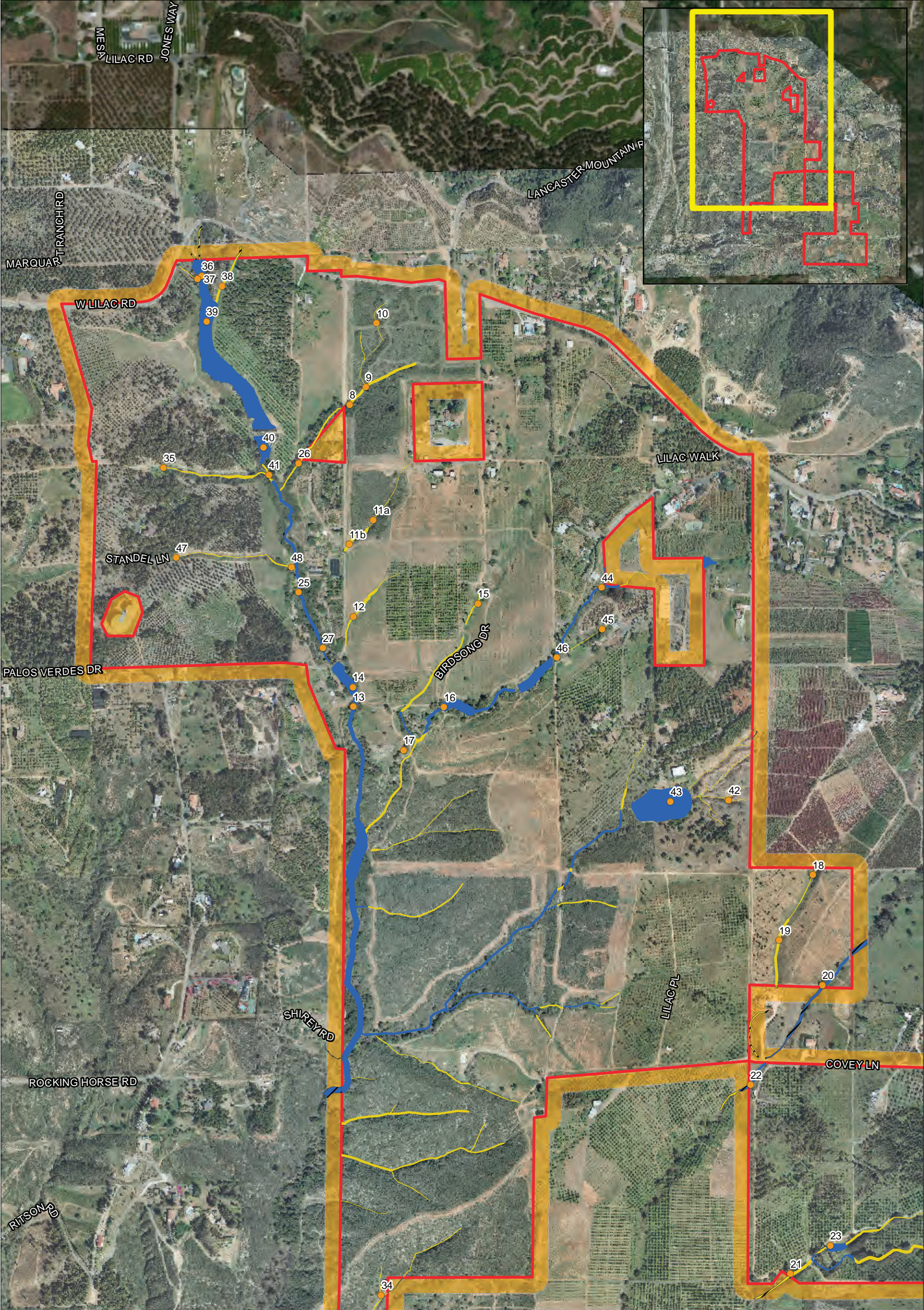
grape. These species may occur in willow scrub vegetation or as components of the coast live oak riparian woodland habitat. Wildlife species commonly observed associated with the wetland areas include Cooper's hawk, yellow warbler (*Dendroica petechia*), yellow-breasted chat (*Icteria virens auricollis*), Anna's hummingbird (*Calypte anna*), lesser goldfinch (*Carduelis psaltria hesperophilus*), blue grosbeak (*Passerina caerulea salicaria*), raccoon, and Bewick's wren (*Thryomanes bewickii*).

The habitat quality of the coast live oak riparian woodlands, southern willow riparian woodlands, and willow scrub habitats in the project area are generally high to moderate depending on the proximity of the wetland to agricultural activities. Canopy cover of the coast live oak woodland and willow woodland/scrub vegetation is generally dense with only a few openings, which are often further covered with a layer of wild grape. Species diversity is high to moderate depending on the location and proximity to agricultural activities where edge effects can affect diversity. The major drainages containing the majority of the wetland habitats on-site continue off-site and connect to similar habitats upstream, but especially downstream.

Portions of the wetlands identified in the project area are disturbed. Some wetland areas have been impacted by agricultural activities (i.e., clearing, edge effects, debris piles, etc.) that lower habitat quality. Other wetland areas have infestations of non-native species, in particular pampas grass, that effect species diversity and habitat quality in the understory. Overall, these disturbed areas are a relatively small acreage of the wetlands delineated on-site.

The wetlands in the project area are important locally because they provide vegetated areas that help protect the watershed. They also provide a water source for local wildlife species and habitat that has both species diversity and structure to support a variety of plants and animals. Regionally, these wetlands and associated drainage courses protect the downstream watershed of Moosa Creek and ultimately the San Luis Rey River by moderating erosion, sedimentation, and stream flows.

Wetland functions and values of the drainage courses in the project area are generally high in the relatively undisturbed areas and lower in disturbed wetlands or areas affected by agriculture. Downstream areas are relatively undisturbed with the exception of small developments and small agricultural operations. The drainages and associated habitat connect to Moosa Creek to the south and west of the project area. Moosa Creek then connects to the San Luis Rey River to the west of I-15. The on-site wetlands provide beneficial biophysical functions, as the smaller ephemeral and larger intermittent streams allow for groundwater recharge during dry times and discharge to downstream waterways during the wet season.

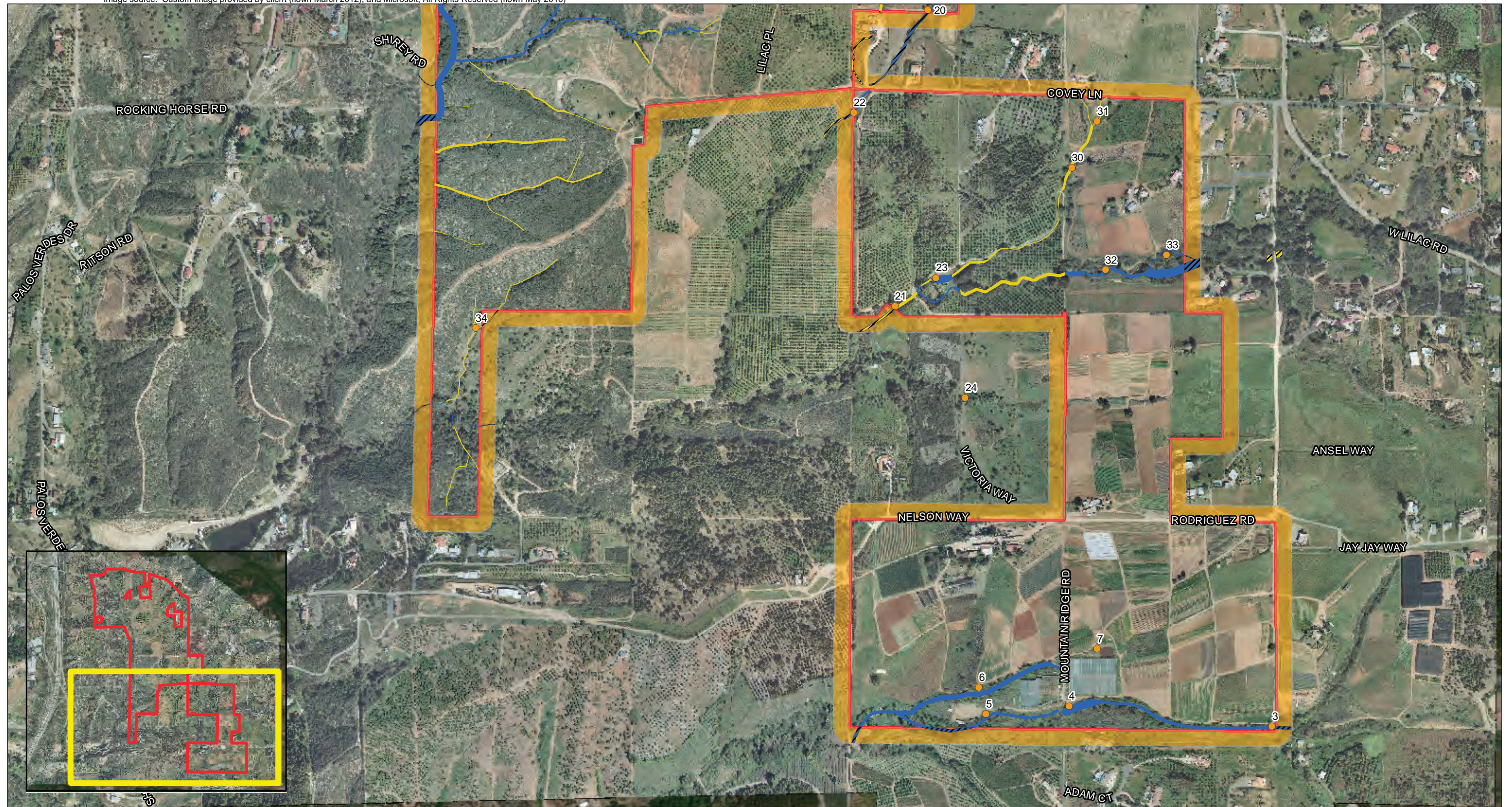


- Project Boundary
- 100-ft. Survey Buffer
- Delineation Sample Point
- Wetland
- Wetland - Off-site
- Non-wetland Water
- Non-wetland Water - Off-site

0 Feet 600

FIGURE 7a
Location of USACE Waters of the U.S.

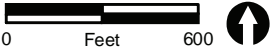
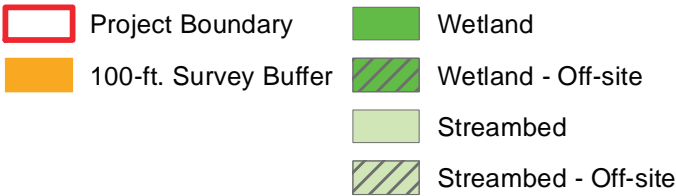
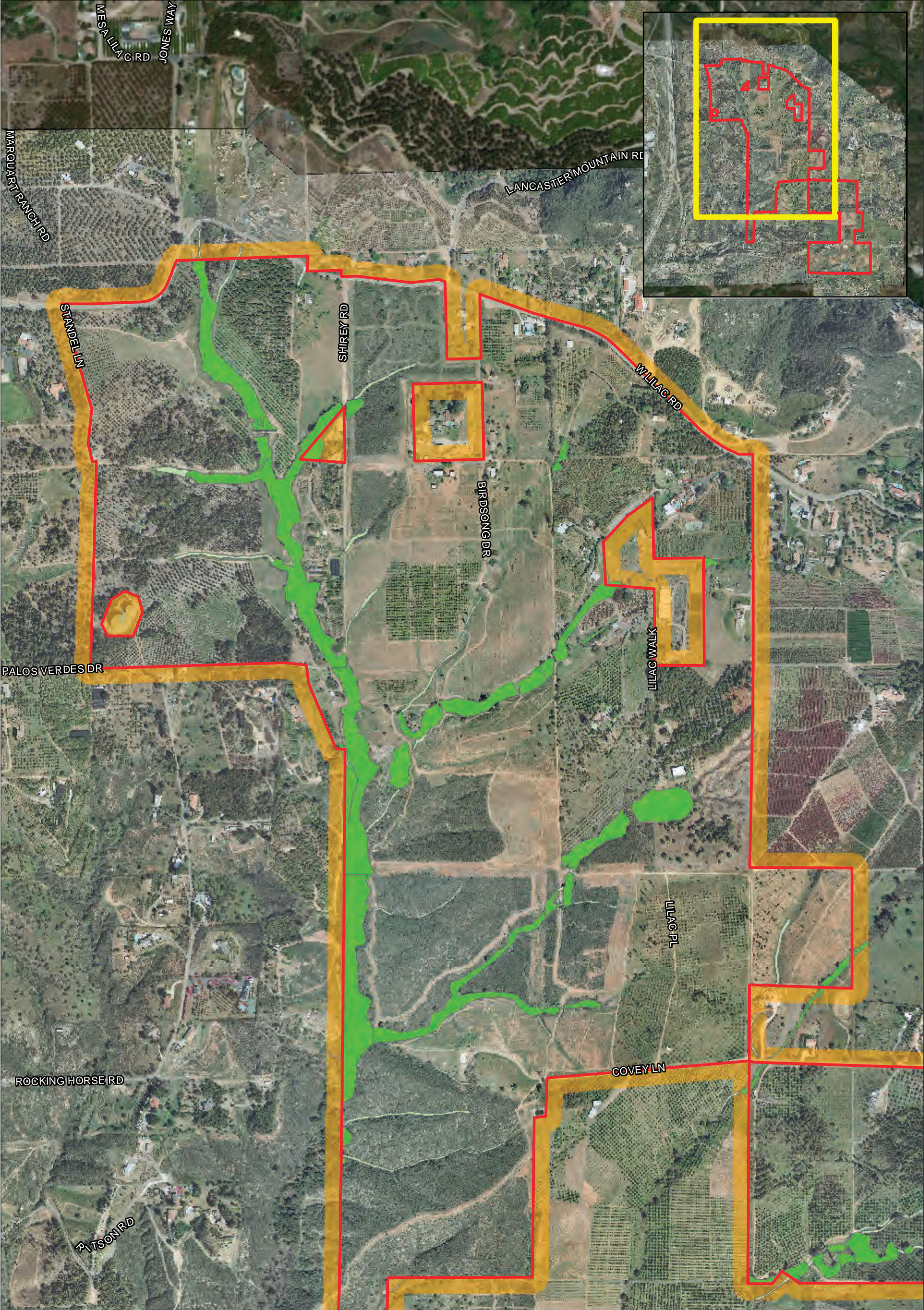
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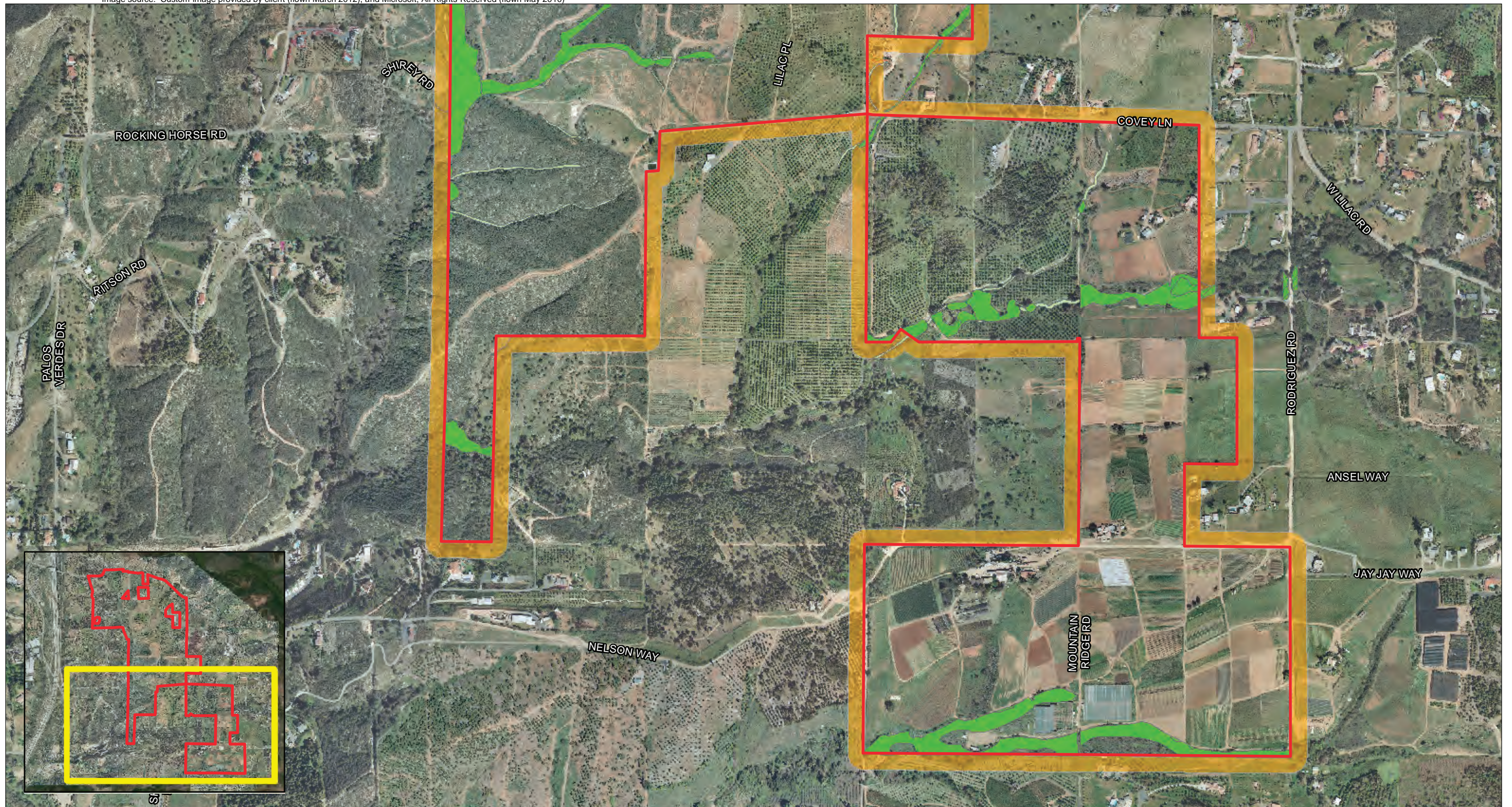
- | | |
|---|---|
| Project Boundary | Wetland |
| 100-ft. Survey Buffer | Wetland - Off-site |
| ● Delineation Sample Point | Non-wetland Water |
| | Non-wetland Water - Off-site |



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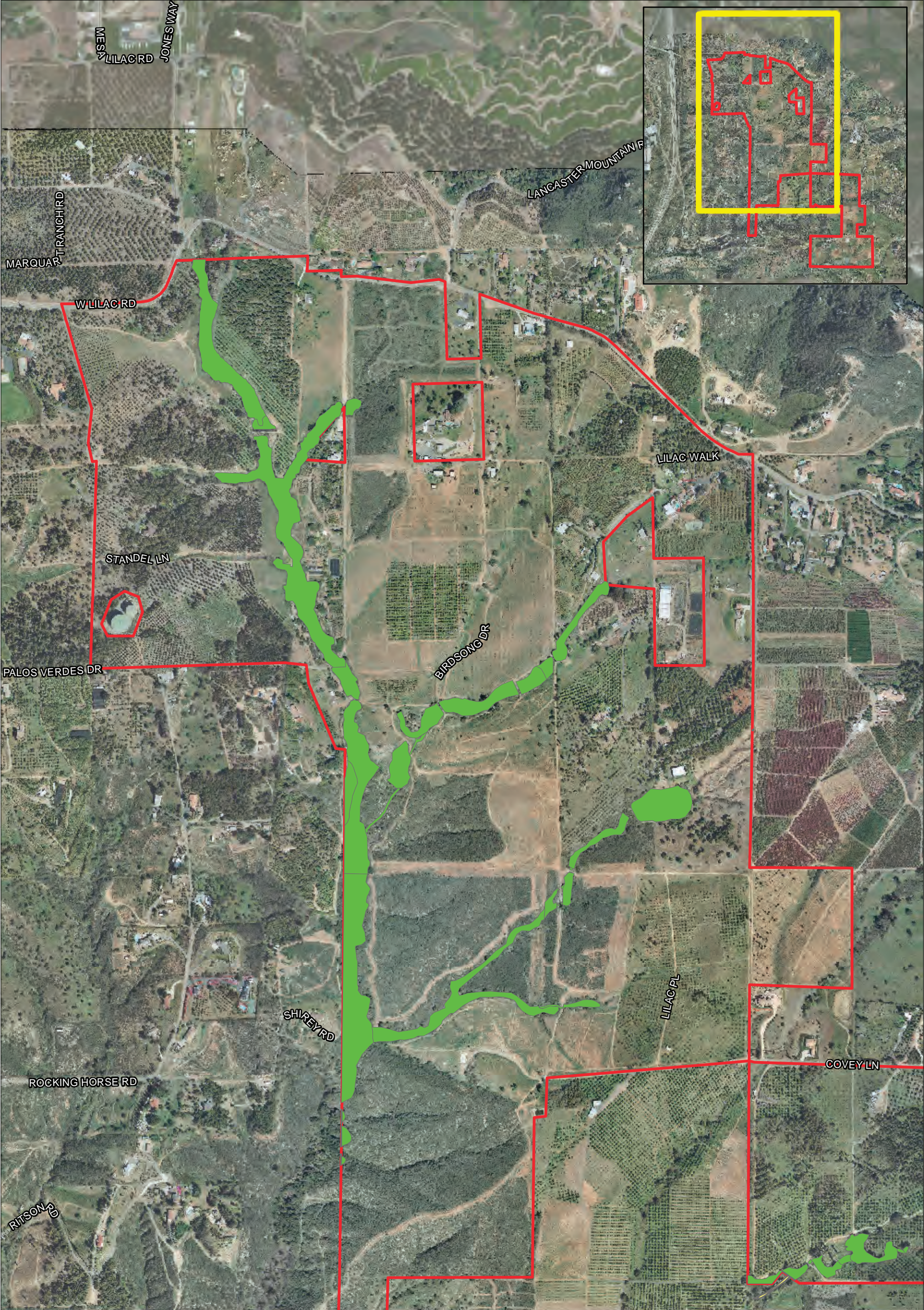
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- | | |
|---|--|
| Project Boundary | Wetland |
| 100-ft. Survey Buffer | Wetland - Off-site |
| | Streambed |
| | Streambed - Off-site |



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- Project Boundary
- County RPO Wetland
- County RPO Wetland - Off-site

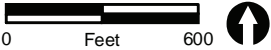
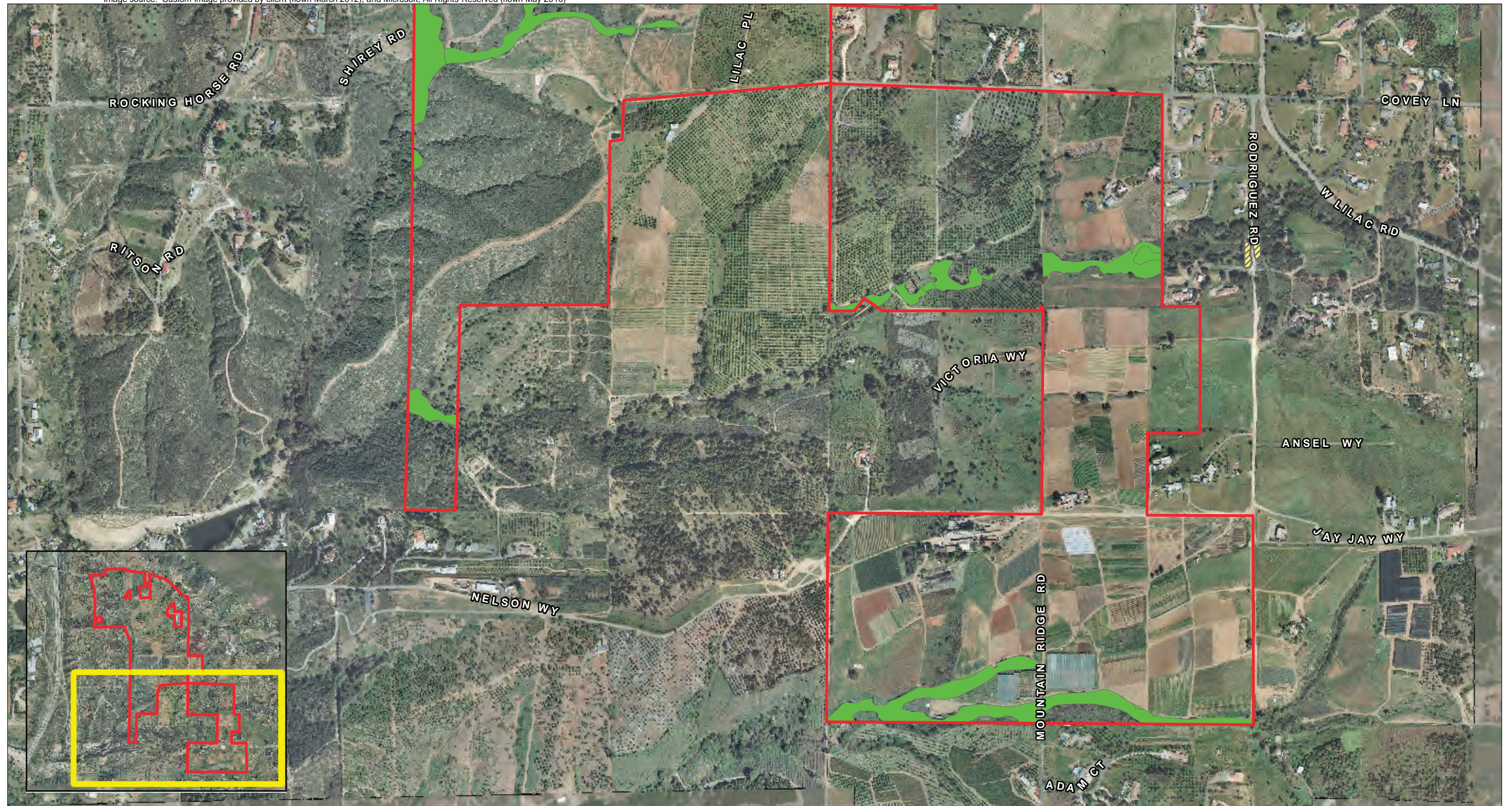


FIGURE 9a
Location of County of San Diego RPO Wetlands

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- Project Boundary
- County RPO Wetland
- County RPO Wetland - Off-site

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Flood control functions of the wetlands on-site are maintained, as the majority of them are densely vegetated with native riparian plant species which help to moderate flows, stabilize soils, trap sediment, and thus control erosion. Sediment from erosion of adjacent agricultural fields has built up in portions of the willow scrub wetlands in the southern portion of the site, but the dense vegetation has helped moderate the discharge of these sediments downstream. Portions of the smaller ephemeral drainages within agricultural fields or orchards have had their flows altered and may experience erosion that contributes to downstream sedimentation.

The dense vegetation of the majority of the wetland areas on-site can trap sediments that may contain toxics from adjacent land uses, thereby keeping them from discharging downstream. This same dense vegetation functions to uptake nutrients in these sediments and recycles them back through the deposition of litter and decomposition of the resultant organic matter, thereby maintaining a healthy nutrient cycle. The coast live oak riparian woodland and willow scrub vegetation also provide a varied structural habitat that can support a diverse assemblage of wildlife species with moderate abundances.

1.4.8 Habitat Connectivity and Wildlife Corridors

This section of the report discusses existing habitat linkages between on-site and off-site lands. It also discusses existing local and regional wildlife corridors related to these habitat linkages.

1.4.8.1 Habitat Connectivity

Native habitat in the project area is located primarily along the western portion of the main project boundary and along the major drainage courses. Habitat connectivity to off-site lands to the east is confined mostly to drainage courses that have remnant patches of native riparian habitat (e.g., riparian woodlands and scrubs). The majority of the land to the east is in some state of agriculture or localized urban development. Native habitat in the northern portion of the project area occurs just south of habitat in Keys Canyon, which is identified as a regional habitat linkage in the draft North County MSCP. Small urban developments and agricultural lands separate on-site coastal sage scrub habitat from coastal sage scrub, mixed chaparral habitats, and riparian woodlands/scrubs in Keys Canyon. Habitat in the southern portion of the project area is north of the regional Moosa Canyon habitat linkage identified in the draft North County MSCP. On-site riparian scrub habitat is separated from habitat patches of coastal sage scrub, mixed chaparral, and riparian woodlands/scrubs to the south by local small urban developments and agricultural operations. Habitat connectivity to the west and southwest is linked through patches of coastal sage scrub, mixed chaparral, and riparian woodlands. Small localized urban developments and agricultural operations are interwoven between this connection and the regional Escondido-Temecula habitat linkage along the I-15 corridor identified in the draft North County MSCP.

Under the existing condition, the relatively large patches of southern mixed chaparral and southern coast live oak woodlands in the project area form a relatively large block of native vegetation between regional habitat linkages to the north, south, and west. These on-site habitat patches are suitable to support local populations of plant and wildlife species and may function as a “stepping stone” connection for wildlife that can migrate between the larger regional connections (see wildlife corridor discussion below).

1.4.8.2 Wildlife Corridors

The project area contains local east-west wildlife corridors primarily along the riparian woodlands and riparian scrubs in the major drainage courses. The relatively large patch of southern mixed chaparral and riparian woodlands on the western portion of the main project area provides dense cover for a local north-south wildlife corridor through the site. The rolling hills and steep-sided drainage courses allow for movement of birds and mammal species between the more open agricultural lands. Wildlife corridors along drainage courses range in width from approximately 100+ feet to less than 50 feet on the more narrow drainages. The north-south wildlife corridor through existing native habitat extends for approximately 7,500+ feet in length, while the four primary east-west wildlife corridors along smaller drainage courses are each approximately 2,300 feet in length.

The above-mentioned corridors are composed of a gentle sloping valley in the southern portion of the site and rolling hills with ridges of various steepness and drainage courses, both shallow and deeper, throughout the remainder of the site. Wildlife species that could use these corridors are likely birds that move up and down the riparian woodlands/scrubs of the drainages, and larger mammals, such as mule deer, coyote, rabbits, etc. Scattered localized developments and agricultural fields and orchards affect the width of the native habitats within these corridors and may deter regular usage by certain mammal species.

The local wildlife corridors identified on-site are not recognized as important regional linkages in the draft North County MSCP. These local wildlife corridors could provide secondary corridor connections between the identified regional linkages to the north (Keys Canyon), south (Moosa Creek), and west (I-15 Escondido – Temecula), primarily along the larger drainage courses.

1.5 Applicable Regulations

Biological resources are subject to regulatory oversight at three levels: federal, state, and local (County of San Diego).

1.5.1 Federal Regulations

Endangered Species Act – The federal Endangered Species Act provides the legal framework for the listing and protection of species (and their habitats) identified as being

endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a 'take' under the Endangered Species Act. Take of a federally listed threatened or endangered species is prohibited without a special permit. The Endangered Species Act allows for take of a threatened or endangered species incidental to development activities once a habitat conservation plan has been prepared to the satisfaction of the USFWS and an incidental take permit has been issued. The Endangered Species Act also allows for the take of threatened or endangered species after consultation has deemed that development activities will not jeopardize the continued existence of the species. The federal Endangered Species Act also provides for a Section 7 Consultation when a federal permit is required, such as a Clean Water Act Section 404 permit.

"Critical Habitat" is a term within the federal Endangered Species Act designed to guide actions by federal agencies (as opposed to state, local, or other agency actions) and defined as "an area occupied by a species listed as threatened or endangered within which are found physical or geographical features essential to the conservation of the species, or an area not currently occupied by the species which is itself essential to the conservation of the species."

Section 404 Clean Water Act Regulations – The Clean Water Act provides wetland regulation at the federal level and is administered by the USACE. The purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting is required for filling waters of the U.S. (including wetlands). Permits may be issued on an individual basis, or may be covered under approved nationwide permits.

Migratory Bird Treaty Act – All migratory bird species that are native to the U.S. or its territories are protected under the federal Migratory Bird Treaty Act, as amended under the Migratory Bird Treaty Reform Act of 2004. The Migratory Bird Treaty Act is generally protective of migratory birds.

1.5.2 State of California

California Environmental Quality Act – CEQA requires that biological resources be considered when assessing the environmental impacts that are the result of proposed actions. The lead agencies determine the scope of what is considered an impact and what constitutes an "adverse effect" on a biological resource.

California Fish and Game Code – The California Fish and Game Code regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as natural resources such as wetlands and waters of the state. It includes the California Endangered Species Act, Streambed Alteration Agreement regulations, and California Native Plant Protection Act. Fish and Game Code states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise

provided by this code or any regulation made pursuant thereto,” and “unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird” unless authorized.

California Endangered Species Act – The California Endangered Species Act, similar to the federal Endangered Species Act, contains a process for listing of species and regulating potential impacts to listed species. State threatened and endangered species include both plants and wildlife, but do not include invertebrates. The designation “rare species” applies only to California native plants. State threatened and endangered plant species are regulated largely under the Native Plant Preservation Act in conjunction with the California Endangered Species Act. State threatened and endangered animal species are legally protected against “take.” The California Endangered Species Act authorizes CDFG to enter into a memorandum of agreement for take of listed species to issue an incidental take permit for a state-listed threatened and endangered species only if specific criteria are met.

Streambed Alteration Agreement Regulations – The California Fish and Game Code (Sections 1600 through 1603) requires a Streambed Alteration Agreement with CDFG for projects affecting riparian, wetland habitats, and all other waters of the state.

California Native Plant Protection Act – Section 1900-1913 of the California Fish and Game Code contains the regulations of the Native Plant Protection Act of 1977. The intent of this act is to help conserve and protect rare and endangered plants in the state.

Regional Water Quality Control Board – The RWQCB not only regulates impacts to water quality in waters of the U.S. under Section 401 of the Clean Water Act, but also regulates the isolated waters that are impacted under the state Porter Cologne Act utilizing a Waste Discharge Requirement. Discharge of fill material into waters of the State not subject to the jurisdiction of the USACE pursuant to Section 404 of the Clean Water Act may require authorization pursuant to the Porter Cologne Act through application for waste discharge requirements or through waiver of waste discharge requirements, despite the lack of a clear regulatory imperative.

Natural Community Conservation Planning (NCCP) Act of 1991 – The NCCP Act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. CDFG is the primary state agency that implements the NCCP. The NCCP plan provides for the comprehensive management and conservation of multiple wildlife species. It identifies and provides for regional protection of natural wildlife diversity while allowing for compatible and appropriate development and growth.

California Oak Woodland Conservation Act – This act established the Oak Woodland Conservation Program, administered by the Wildlife Conservation Board, to help local jurisdictions protect and enhance their oak woodland resources. It offers landowners,

conservation groups, and cities/counties an opportunity to obtain funding for projects designed to conserve and restore California's oak woodlands.

1.5.3 County of San Diego

San Diego County General Plan – Chapter 5 Conservation and Open Space Element – The Open Space Element and Conservation Element of the General Plan provides guiding principles for the conservation of biological resources. The Open Space element outlines the goals and policies pertaining to each type of open space. The Conservation Element addresses County policies relating to water, vegetation, and wildlife habitat. This element also outlines the County's Resource Conservation Areas, and when a site is located within a mapped Resource Conservation Area, the project must comply with the relevant policies for the Resource Conservation Area.

Multiple Species Conservation Program and Biological Mitigation Ordinance – As part of the implementation of the NCCP, the County, along with other local agencies, is in the process of preparing MSCPs. The goal of the MSCP is to maintain and enhance biological diversity in the region and maintain viable populations of endangered, threatened, and key sensitive species and their habitats while promoting regional economic viability through streamlining the land use permit process.

The County is currently in the process of creating a MSCP Plan for the unincorporated areas of northern San Diego County. This plan, if adopted, will be regulated by the Biological Mitigation Ordinance (BMO), which outlines the specific criteria (i.e., project design, impact allowances, mitigation requirements) for projects within an MSCP boundary. The BMO would only be applicable if the North County MSCP is adopted.

The MSCP generally does not designate an exact preserve boundary, but instead designates large PAMAs within which conservation efforts are to be concentrated and a preserve will be assembled. The MSCP generally provides incentives for development to occur outside of a PAMA. The proposed Lilac Hills Ranch project would be outside of any PAMA as designated in the draft North County MSCP.

A hardline is a designation that has been agreed upon between landowners, the wildlife agencies, and the County. In such areas, preservation and development area decisions are made during MSCP development with respect to the location of open space and development.

Resource Protection Ordinance – The RPO limits impacts to several sensitive natural resources found throughout San Diego County. These sensitive resources include wetlands, wetland buffers, floodplains, steep slopes, sensitive habitat lands, and prehistoric and historic sites. Under the RPO, impacts to wetlands are restricted and a wetland buffer is required where development is adjacent to wetland areas. In addition, encroachment into RPO steep slopes lands (25 percent or greater grade for 50 or more

feet) must be minimized. RPO also limits impacts to sensitive habitat lands, which include unique vegetation communities and/or the habitat that is either necessary to support a viable population of sensitive species, is critical to the proper functioning of a balanced natural ecosystem, or which serves as a functioning wildlife corridor.

Habitat Loss Permit Ordinance - The County regulates coastal sage scrub habitat loss through the Habitat Loss Permit (HLP) Ordinance. An HLP is a process that enables the County of San Diego to issue "take" permits for the federally listed coastal California gnatcatcher, as allowed through the federal Endangered Species Act. An HLP application must be filed with the County, and approval requires concurrence from USFWS and CDFG. Approval is based on Findings made pursuant to the County's HLP Ordinance (County of San Diego 1995) as required by the NCCP Process Guidelines. Until the North County MSCP is approved, the HLP is required for all coastal sage scrub impacts, whether or not the coastal California gnatcatcher occupies the habitat. An HLP also requires a mitigation plan for impacts to coastal sage scrub and disturbed coastal sage scrub.

2.0 Project Effects

This section of the report discusses the direct and indirect impacts to biological resources from the proposed project. Direct impacts are those incurred during the construction of the project that result in the loss of biological resources (e.g., vegetation clearing, fuel modification, staging areas). Indirect impacts are those incurred both during construction (i.e., noise) and post-construction (i.e., edge effects due to noise, lighting, drainage, etc.). Impacts to habitats and vegetation communities, jurisdictional waters including wetlands, sensitive plant and wildlife species, and wildlife corridors, linkages, and nursery sites are discussed separately below.

2.1 Impacts to Habitats and Vegetation Communities

The proposed project would impact habitats and vegetation communities over much of the project area and within portions of the off-site improvement areas, including measures to improve sight distance along West Lilac Hills Road south of Covey Lane (Attachment 13). Acreages for direct impacts to habitats and vegetation communities are summarized in Table 4, and impact locations are shown on Figures 10a-c. A determination of the significance of these impacts is discussed below in Sections 4.1 and 4.2, and mitigation measures are discussed in Section 4.4.

TABLE 4
SUMMARY OF DIRECT IMPACTS TO HABITATS AND VEGETATION COMMUNITIES

Habitat/Vegetation Community	Existing (acres)	Impacts (acres)	Off-site Impacts (acres)
Coast live oak woodland	3.6	0.3	0
Coastal sage scrub	19.6	17	0.1
Disturbed coastal sage scrub	2.9	2.6	0
Disturbed coastal/valley freshwater marsh	0.6	0.1	0
Eucalyptus woodland	1.7	1.0	0
Southern coast live oak riparian woodland	22.5	1.1	0
Disturbed southern coast live oak riparian woodland	1.9	0.5	0
Southern mixed chaparral	75.4	49.4	0
Disturbed southern mixed chaparral	6.0	4.9	0
Southern willow riparian woodland	4.7	0.5	0
Southern willow scrub	6.1	0.3	0
Disturbed southern willow scrub	0.3	0.3	0
Mule fat scrub	0.1	0.1	0
Open water – fresh water	0.5	0.5	0
Disturbed wetland	0.4	0.1	0
Extensive agriculture – row crops	90.5	85	0
Intensive agriculture – nursery	9.2	6.7	0
Vineyard	0.7	0.6	0
Orchard	291.9	276.8	1.2
Disturbed habitat	44.0	34.8	2.7
Developed	25.7	22.8	21.1
TOTAL	608.3	505.4	25.1

The majority of the proposed trails would be located in the development area except where they cross the biological open space (Attachment 14). Trails that cross into the biological open space areas all occur on existing dirt roads or foot trails and would not result in any additional impacts to vegetation. Where trails cross drainages in open space, the dirt road would be left as is and at grade. Therefore, no additional impacts to wetlands would occur from trails. Proposed sewer lines and associated pump stations would be located outside of the biological open space (see Figures 10a-c). Where sewer lines must cross the biological open space, they will be placed where future roads will be built; therefore, no additional impacts to vegetation or wetlands are anticipated. Temporary fencing shall be installed where the proposed sewer line crosses biological open space to ensure that impacts are confined to the future road footprint. A pre-construction meeting shall be held to educate contractors on the sensitivity and work limits associated with the crossings of biological open space areas. A biologist shall monitor all construction activities of the sewer line where the line will cross biological open space.

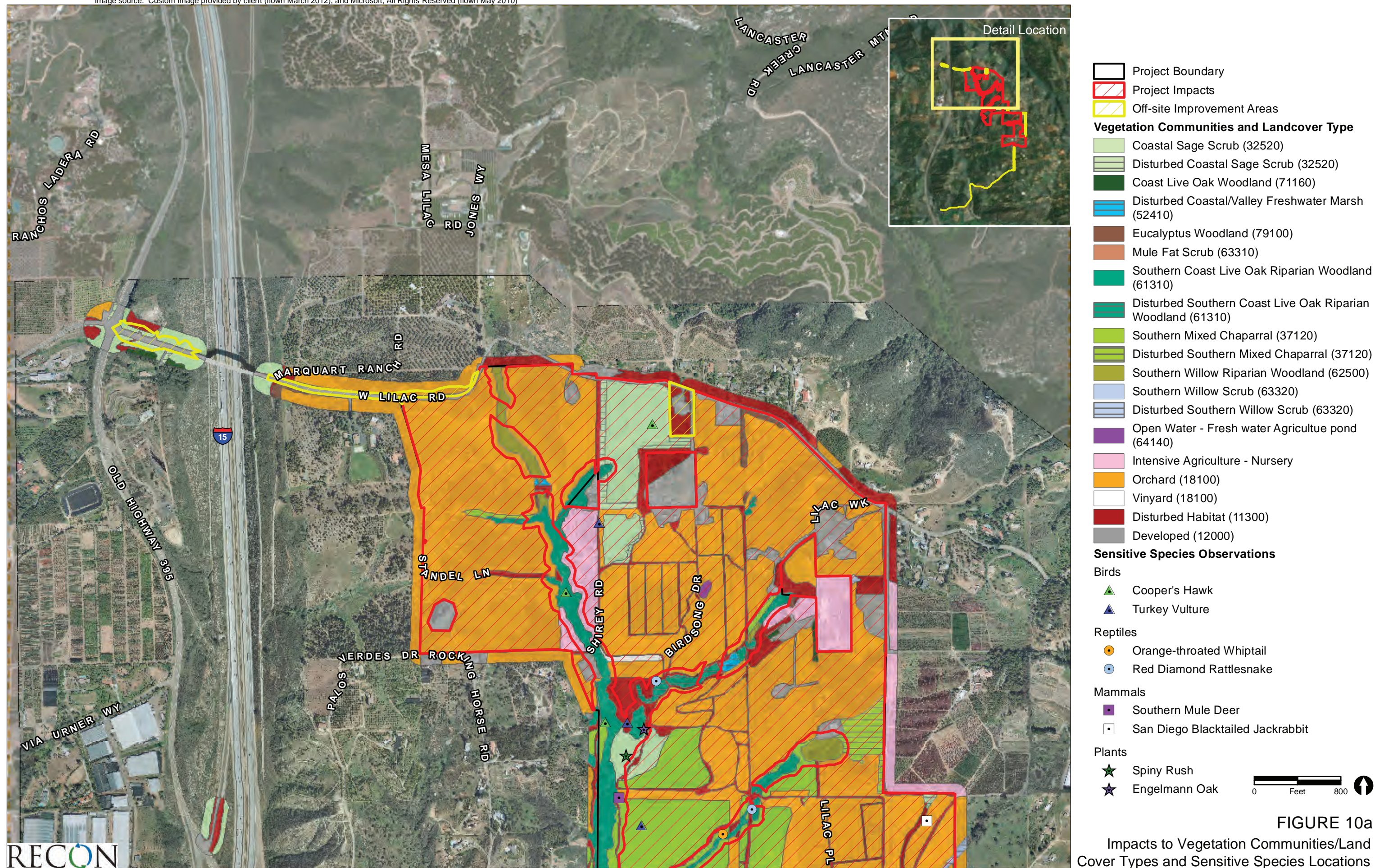
In Phase 1, a section of sewer line will cross the biological open space where there is no proposed road crossing. However, this line would be associated with a pedestrian bridge and hung from the bridge so no additional impacts to wetlands or vegetation would occur at this location.

The proposed project would be constructed in five phases. Impacts to habitats and vegetation communities would occur in increments depending on the area of the particular phase of development (Table 5). The dedication of biological open space areas would also be phased (see Section 8 Summary of Project Impacts and Mitigation). Direct and indirect impacts associated with construction would be restricted to within the particular phase boundary at the time of development.

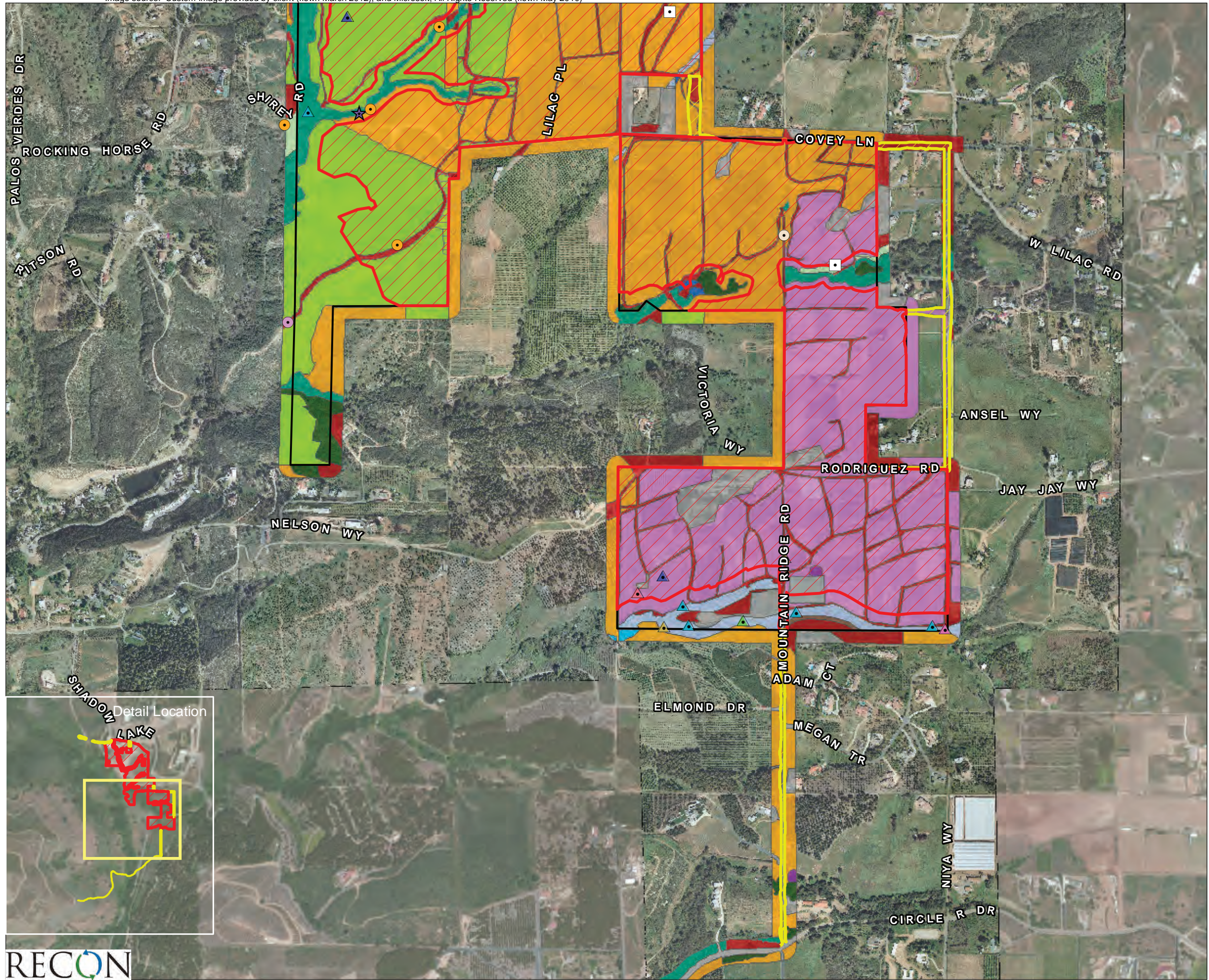
Off-site improvements to Rodriguez Road may be necessary, depending on the timing of the construction of the Lilac Hills Ranch project. If these road improvements are constructed by the Lilac Hills Ranch project, an additional 0.48 acre of impact would occur to the following off-site habitats and vegetation communities: 0.02 acre of coast live oak woodland, 0.04 acre of coastal sage scrub, 0.08 acre of non-native grassland, 0.03 acre of southern coast live oak riparian woodland, 0.11 acre of disturbed land, 0.08 acre of extensive agriculture – row crops, and 0.12 acre of developed land.

2.2 Impacts to Jurisdictional Waters/Wetlands

The proposed project would impact jurisdictional waters, including wetlands, across the site. Jurisdictional waters and wetlands covered under the authority of the USACE (waters of the U.S.), CDFG (waters of the state), RWQCB (waters of the state), and County of San Diego (RPO wetlands) would be impacted. Acreages for direct impacts to jurisdictional waters, including wetlands, are summarized by jurisdiction in Table 6.



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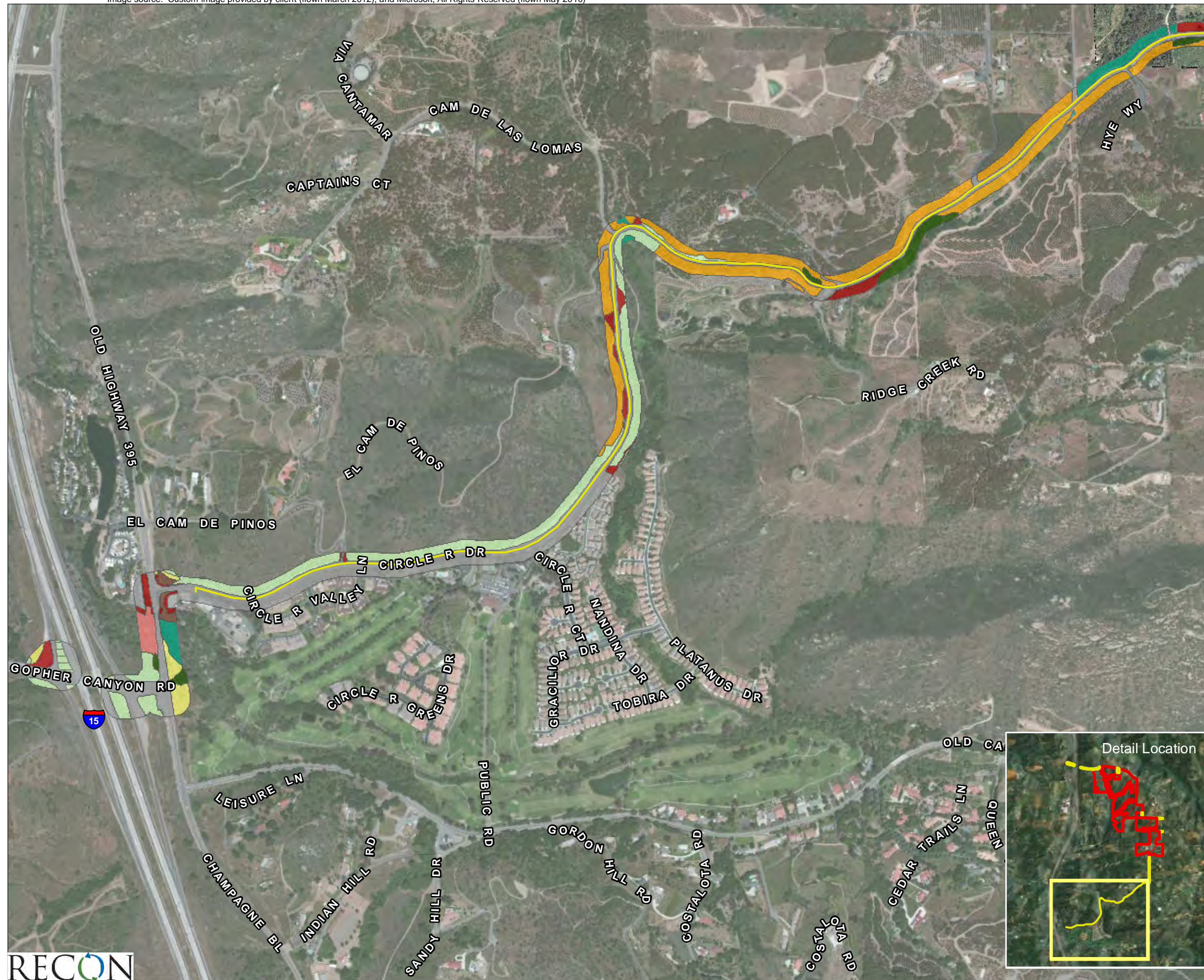


- Project Boundary
- Project Impacts
- Off-site Improvement Areas
- Vegetation Communities and Landcover Type**
 - Coastal Sage Scrub (32520)
 - Disturbed Coastal Sage Scrub (32520)
 - Coast Live Oak Woodland (71160)
 - Coastal/Valley Freshwater Marsh (52410)
 - Disturbed Wetland (11200)
 - Eucalyptus Woodland (79100)
 - Non-native Grassland (42200)
 - Southern Coast Live Oak Riparian Woodland (61310)
 - Disturbed Southern Coast Live Oak Riparian Woodland (61310)
 - Southern Mixed Chaparral (37120)
 - Disturbed Southern Mixed Chaparral (37120)
 - Southern Willow Scrub (63320)
 - Disturbed Southern Willow Scrub (63320)
 - Open Water - Fresh water Agriculture pond (64140)
 - Extensive Agriculture - Row Crops
 - Orchard (18100)
 - Disturbed Habitat (11300)
 - Developed (12000)
- Sensitive Species Observations**
 - Birds**
 - Western Bluebird
 - Cooper's Hawk
 - Yellow-breasted Chat
 - Turkey Vulture
 - White-tailed Kite
 - Yellow Warbler
 - Reptiles**
 - Orange-throated Whiptail
 - Red Diamond Rattlesnake
 - Coast Horned Lizard
 - Coastal Western Whiptail
 - Mammals**
 - San Diego Blacktailed Jackrabbit
 - Plants**
 - Engelmann Oak



FIGURE 10b
Impacts to Vegetation Communities/Land
Cover Types and Sensitive Species Locations

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- Off-site Sewer
- Vegetation Communities and Landcover Type**
- Coastal Sage Scrub (32520)
 - Disturbed Coastal Sage Scrub (32520)
 - Coast Live Oak Woodland (71160)
 - Disturbed Coastal/Valley Freshwater Marsh (52410)
 - Eucalyptus Woodland (79100)
 - Non-native Grassland (42200)
 - Southern Coast Live Oak Riparian Woodland (61310)
 - Southern Sycamore Riparian Woodland (62400)
 - Orchard (18100)
 - Disturbed Habitat (11300)
 - Developed (12000)

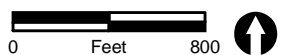


FIGURE 10c

Impacts to Vegetation Communities/Land Cover Types and Sensitive Species Locations

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TABLE 5
SUMMARY OF ON-SITE DIRECT IMPACTS TO HABITATS AND VEGETATION COMMUNITIES BY PROJECT PHASE

Habitat/Vegetation Community	Existing (acres)	Phase 1 Impacts (acres)	Phase 2 Impacts (acres)	Phase 3 Impacts (acres)	Phase 4 Impacts (acres)	Phase 5 Impacts (acres)	Total Impacts (acres)
Coast live oak woodland	3.6	0	0	0.3	0	0	0.3
Coastal sage scrub	19.6	8.6	5.7	2.7	0	0	17
Disturbed coastal sage scrub	2.9	1.2	1.1	0.3	0	0	2.6
Disturbed coastal/valley freshwater marsh	0.6	0.1	0	0	0	0	0.1
Eucalyptus woodland	1.7	1.0	0	0	0	0	1
Southern coast live oak riparian woodland	22.5	0.5	0.2	0.3	0.1	0	1.1
Disturbed southern coast live oak riparian woodland	1.9	0	0	0.5	0	0	0.5
Southern mixed chaparral	75.4	0.5	0	48.9	0	0	49.4
Disturbed southern mixed chaparral	6.0	0	0	4.9	0	0	4.9
Southern willow riparian woodland	4.7	0.5	0	0	0	0	0.5
Southern willow scrub	6.1	0	0	0.1	0	0.2	0.3
Disturbed southern willow scrub	0.3	0	0	0.2	0.1	0	0.3
Mule fat scrub	0.1	0	0	0.1	0	0	0.1
Open water – fresh water	0.5	0	0.3	0	0	0.2	0.5
Disturbed wetland	0.4	0	0	0	0.1	0	0.1
Extensive agriculture – row crops	90.5	0	0	0	7.0	77.5	84.5
Intensive agriculture – nursery	9.2	1.3	4.7	0.2	0	0	6.2
Vineyard	0.7	0	0.6	0	0	0	0.6
Orchard	291.9	87.4	50.7	94.4	40.8	3.1	276.4
Disturbed habitat	44.0	2.2	6.5	14.1	3.4	8.6	34.8
Developed	25.7	4.8	2.7	7.4	1.5	6.4	22.8
TOTAL	608.3	108.1	72.5	174.4	53.0	96.0	505.0

TABLE 6
SUMMARY OF DIRECT IMPACTS TO
JURISDICTIONAL WATERS WITHIN THE PROJECT AREA

Jurisdictional Waters	Existing (acres)	Impacts (acres)	Offsite Impacts (acres)
USACE Jurisdiction			
Non-wetland waters of the U.S.	4.69	2.92	
Wetlands	13.44	1.30	0
USACE Total Jurisdiction	18.13	4.22	0
CDFG/RWQCB Jurisdiction			
Streambed	4.18	3.1	
State Wetlands (Riparian habitat)	39.35	3.45	0
CDFG Total Jurisdiction¹	43.52	6.55	0
County of San Diego RPO Wetlands	37.64	2.23	0

Locations of impacts to jurisdictional waters and wetland on-site are shown on Figures 11a–d. A determination of the significance of these impacts is discussed in Section 5.1 and 5.2, and mitigation requirements in Section 5.4.

Impacts to RPO wetlands on-site would result from seven road crossings. An analysis of the required findings to allow crossings of RPO wetlands was prepared for the on-site crossing impact locations (Attachment 15). This analysis concludes that the proposed crossings meet the findings necessary to allow the impacts through impact avoidance and minimization by placing the proposed crossings where RPO wetlands are narrow, disturbed, and at existing roads. Further, the findings show that there is the potential to eliminate crossings of RPO wetlands from future adjacent development projects, and that the impacts to RPO wetlands will be mitigated per County requirements.

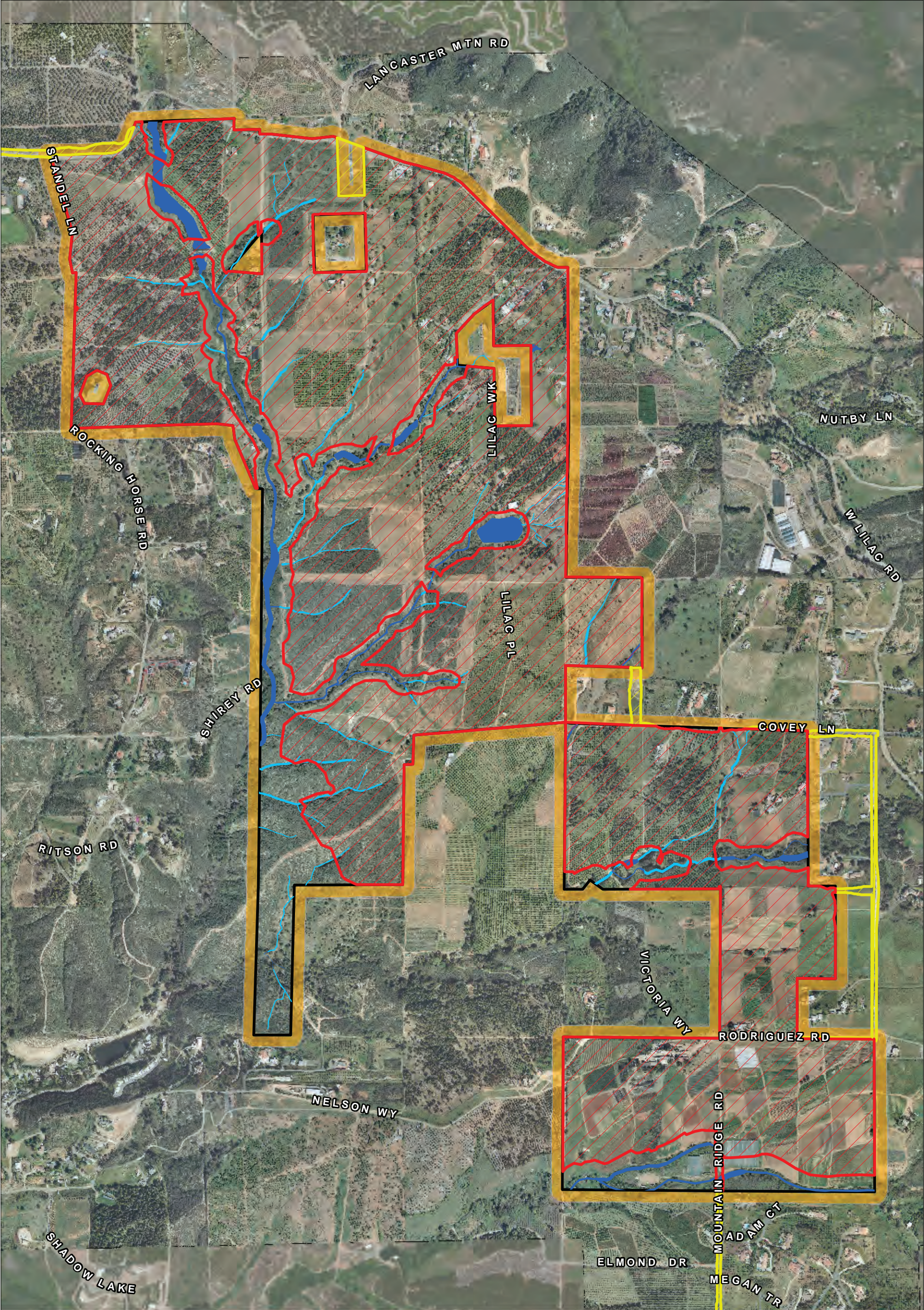
Off-site improvements to Rodriguez Road may be necessary, depending on the timing of the construction of the Lilac Hills Ranch project. If these road improvements are constructed by the Lilac Hills Ranch project, an additional 0.03 acre of USACE/CDFW/RWQCB/RPO wetland would be impacted due to improvements to the existing road.

2.3 Impacts to Sensitive Species

This section discusses the direct and indirect impacts the proposed project would have on sensitive species present on-site. Impacts to sensitive plants and sensitive wildlife are discussed separately below.

2.3.1 Impacts to Sensitive Plants

The proposed project could impact an estimated 100 individuals of prostrate spineflower. No direct impacts to spiny rush or Engelmann oak would result from project implementation.

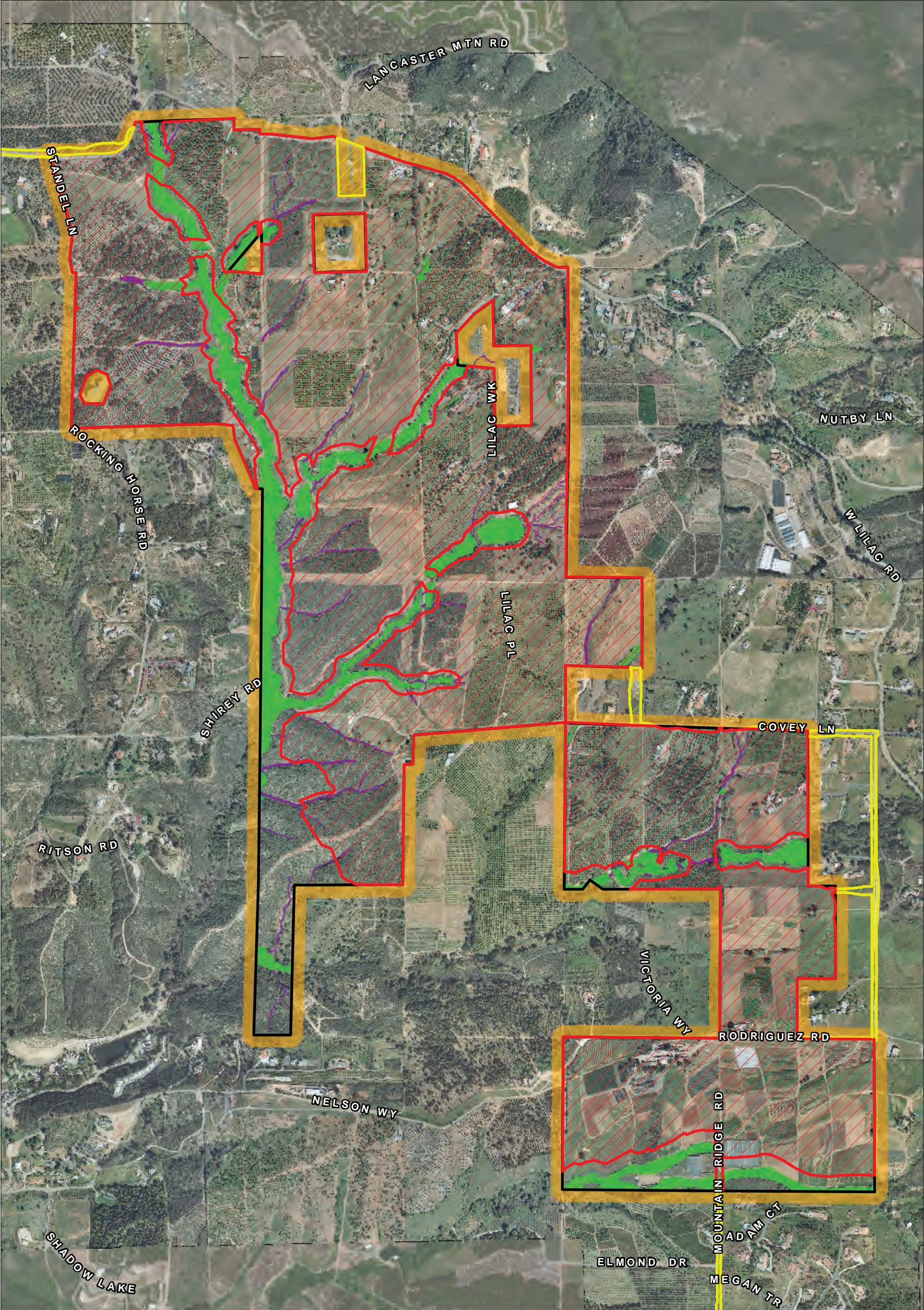


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|-----------------------|-------------------|----------------------------|
| Project Boundary | Wetland | Project Impacts |
| 100-ft. Survey Buffer | Non-wetland Water | Off-site Improvement Areas |

FIGURE 11a

Impacts to USACE Waters of the U.S.

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|-----------------------|-----------|----------------------------|
| Project Boundary | Wetland | Project Impacts |
| 100-ft. Survey Buffer | Streambed | Off-site Improvement Areas |

FIGURE 11b

Impacts to CDFG/RWQCB State Waters