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

PROJECT APPLICANT:
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12275 EL CAMINO REAL, SUITE 110
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PREPARED FOR:
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 RPL43 and 5572 RPL43
MUP 3300-12-005

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June 4, 2014
~~June 5, 2013~~

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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

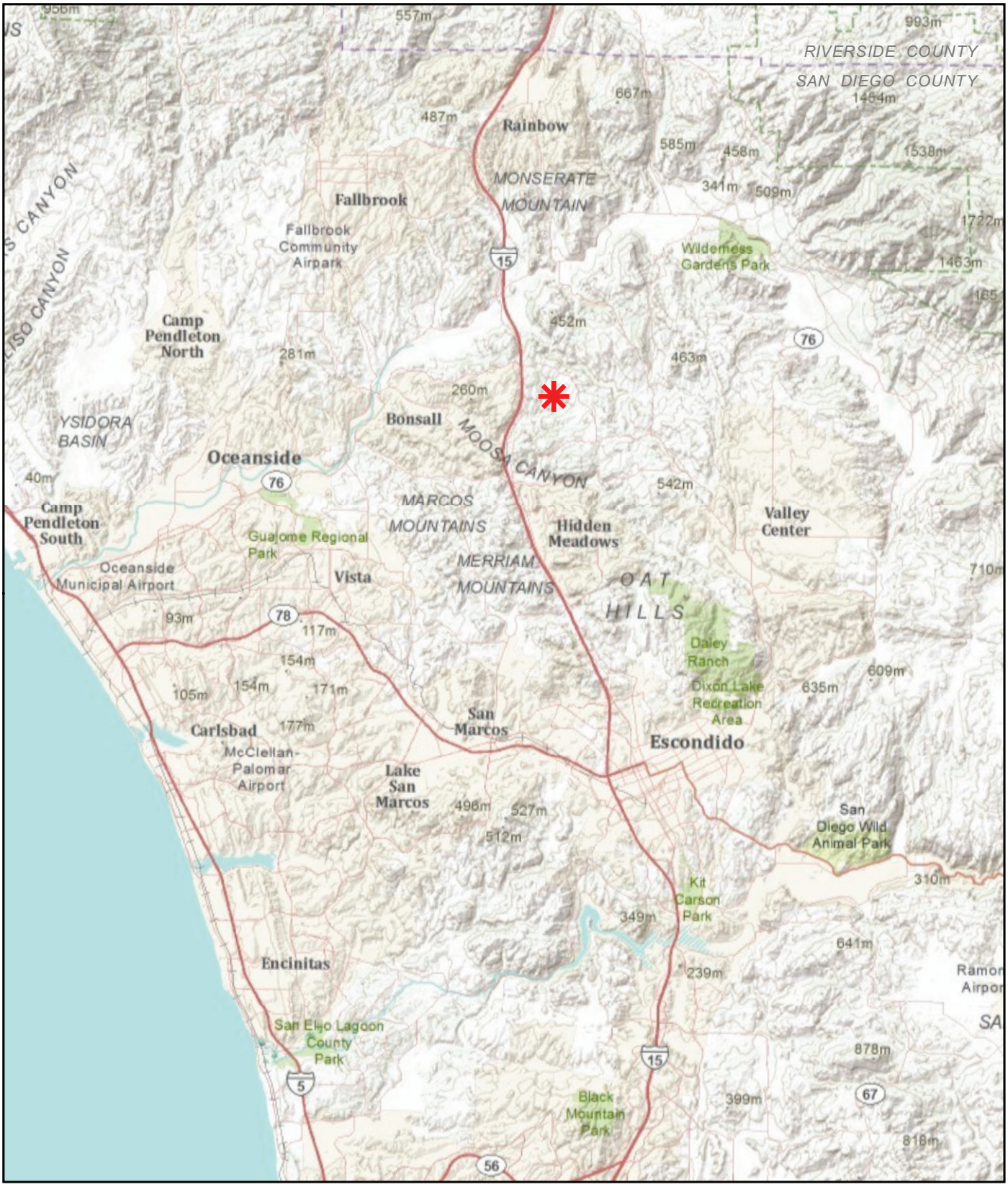
This biological technical report was prepared for the proposed Lilac Hills Ranch Specific Plan and General Plan Amendment Area. It provides the details of the existing biological resources present or potentially present on-site, discusses direct and indirect impacts to these resources from the proposed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

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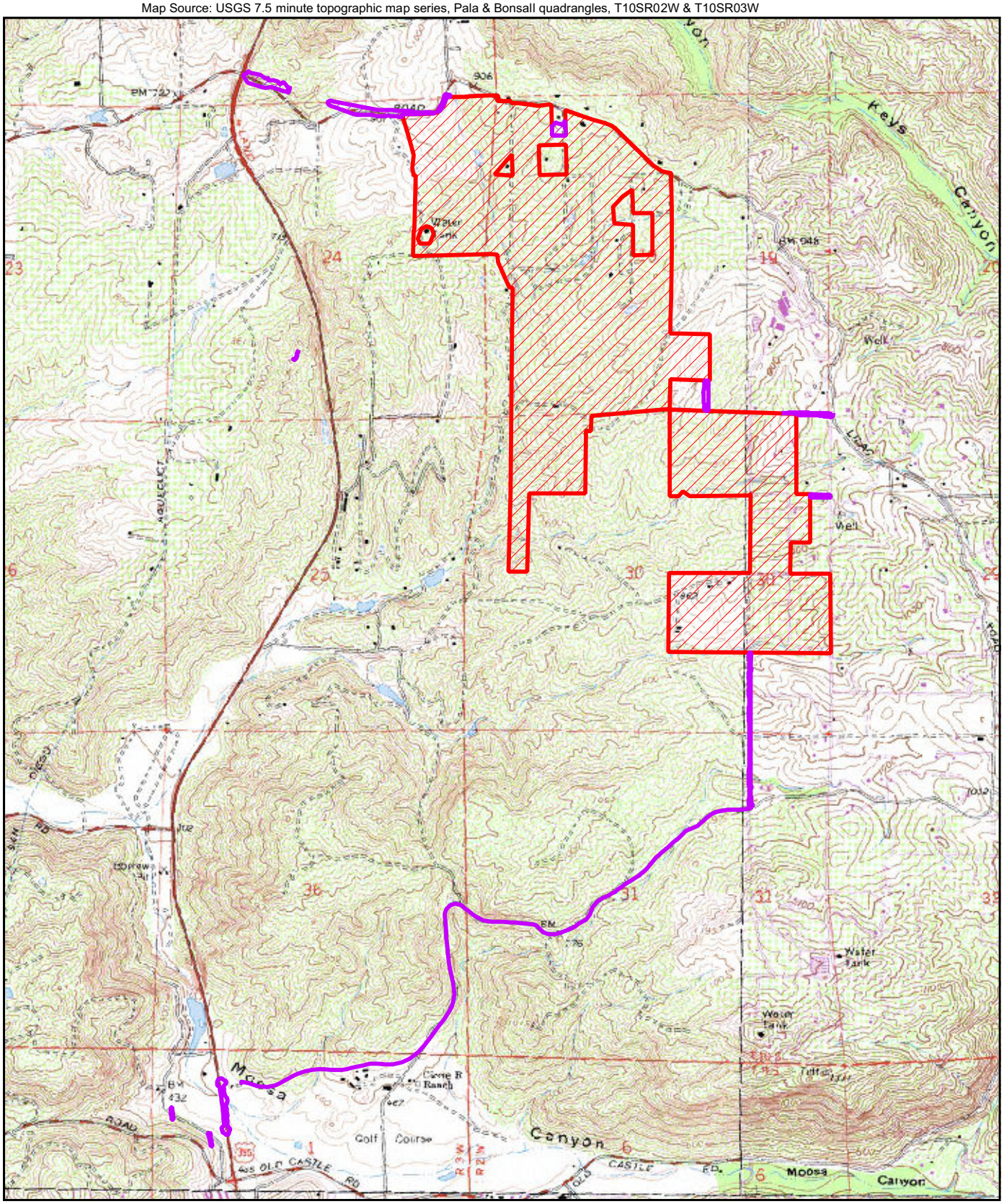
Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



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Project Boundary

Off-site Improvement Areas

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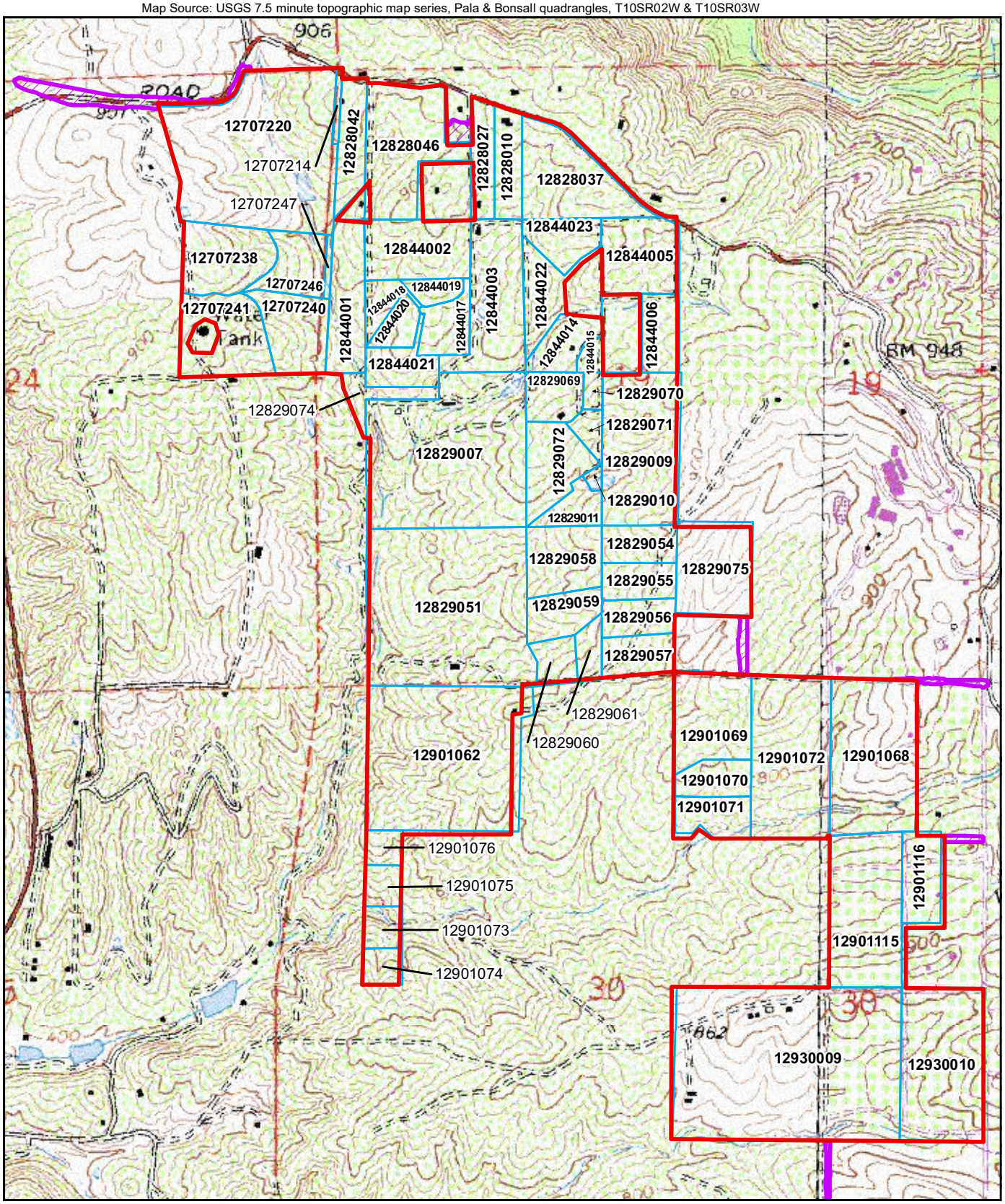
FIGURE 2

Project Location on USGS Map

Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



Project Boundary

Off-site Improvement Areas

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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 (CNDDB) 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

TABLE 1
BIOLOGICAL RESOURCE SURVEY INFORMATION
(continued)

Survey Date	Type of Survey	Time	Weather Conditions	Biologist Conducting Survey
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
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

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 CNDDB (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 (*Polioptila 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 ~~Bufo~~ 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 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 letter to the USFWS is provided as Attachment 1 to this report.

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, Cieneba, 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.

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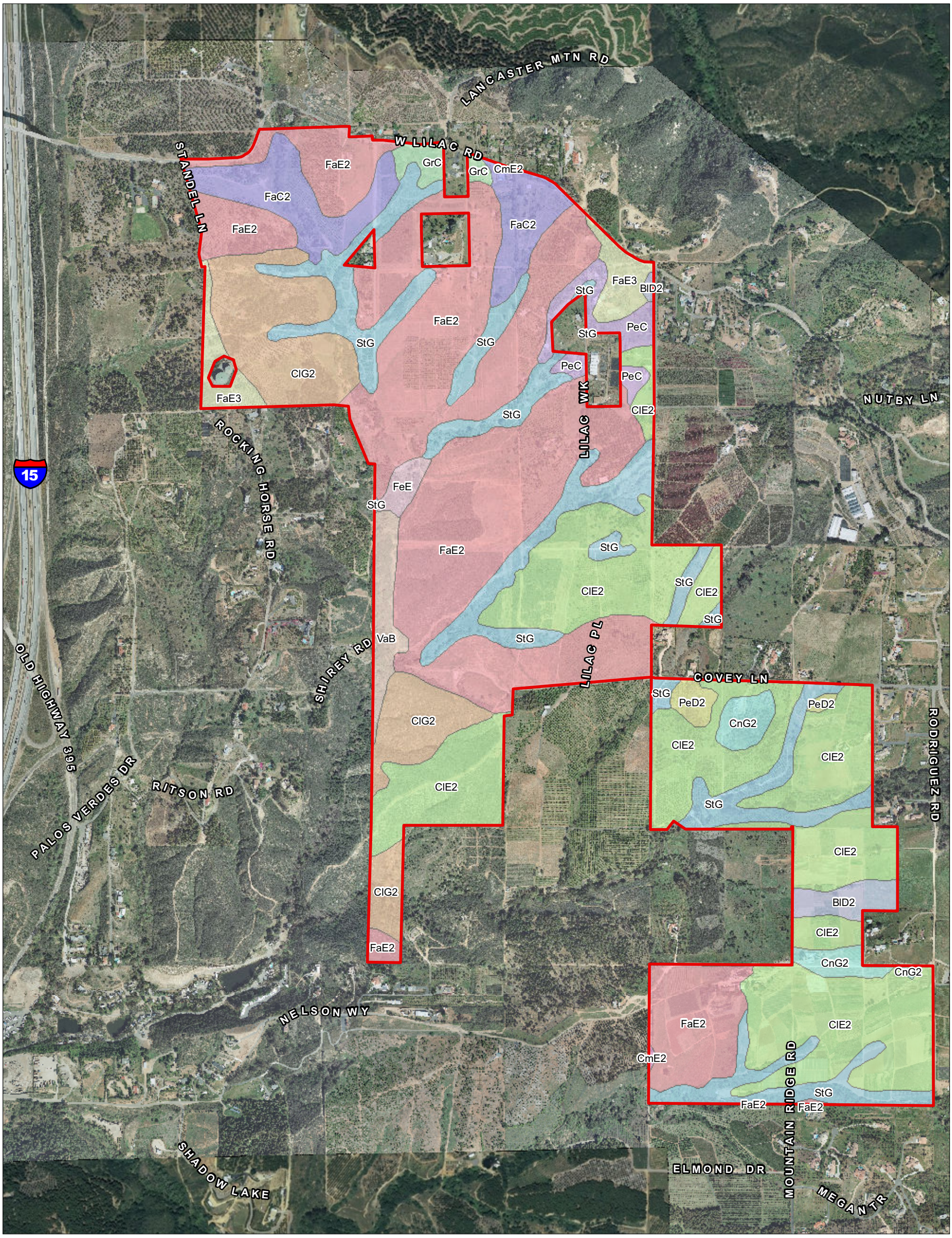

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Project Boundary

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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Soils

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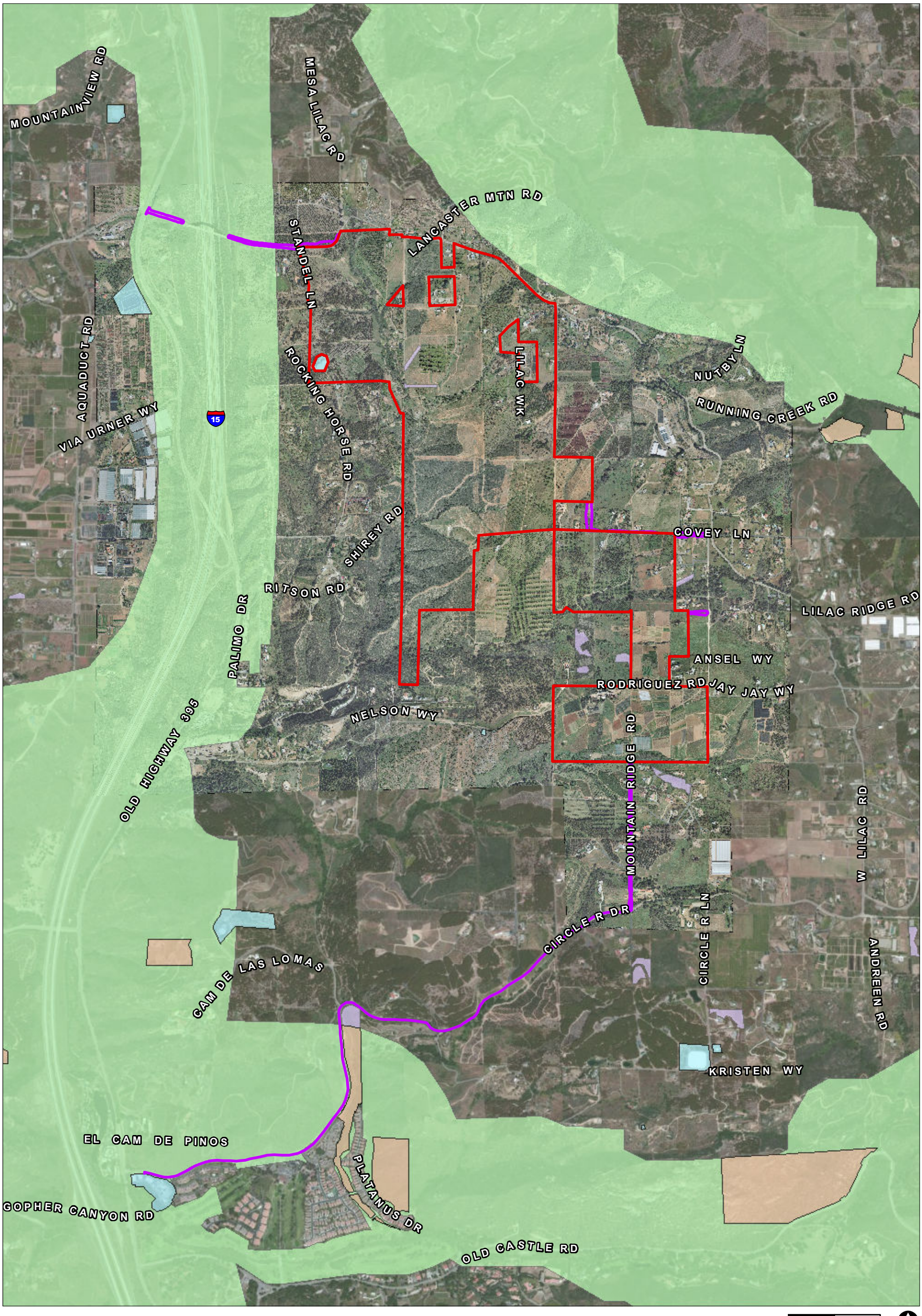

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Project Boundary

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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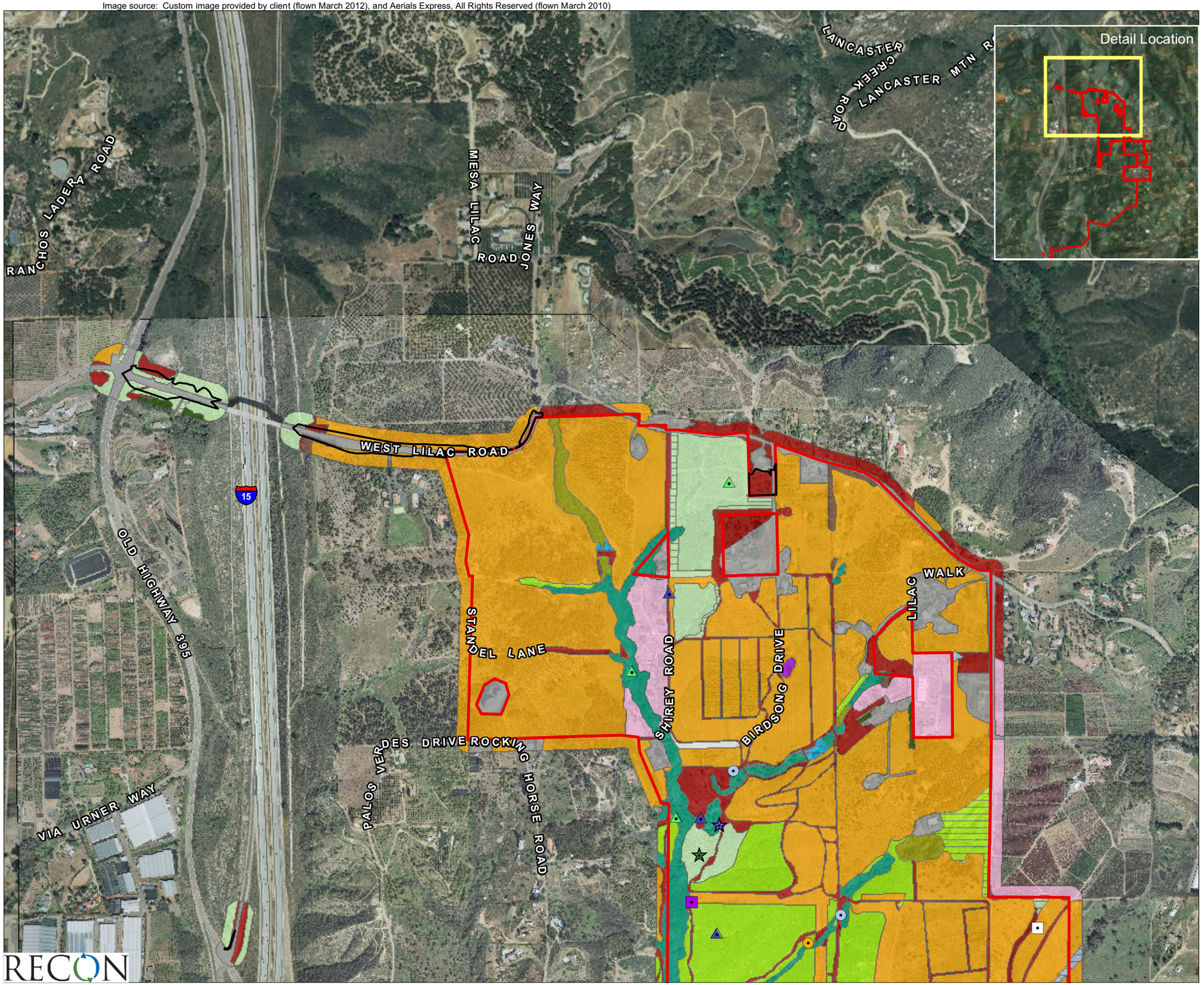

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Project Boundary

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)
- Mule Fat Scrub (63310)
- 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 Riparian Woodland (62500)
- Southern Willow Scrub (63320)
- Disturbed Southern Willow Scrub (63320)
- Open Water - Fresh water Agricultue pond (64140)
- Intensive Agriculture - Nursery (18200)
- Orchard (18100)
- Vinyard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

Sensitive Species Observations

Birds

- Cooper's Hawk
- Turkey Vulture

Reptiles

- Orange-throated Whiptail
- Red Diamond Rattlesnake

Mammals

- Southern Mule Deer
- San Diego Blacktailed Jackrabbit

Plants

- Spiny Rush
- Engelmann Oak

0 Feet 800

FIGURE 6a

Vegetation Communities/Land Cover Types and Sensitive Species Locations

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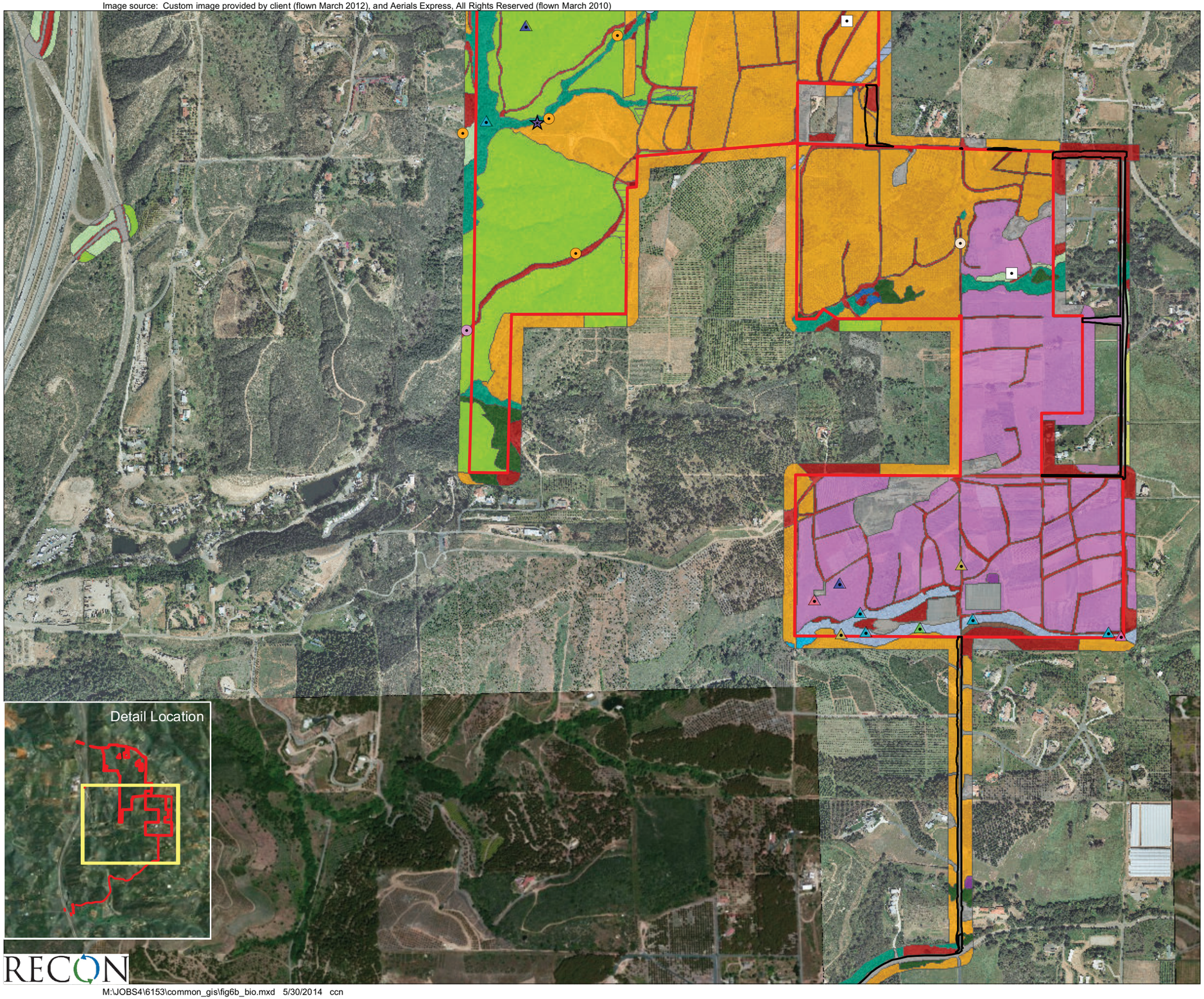

Project Boundary

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 Agricultue pond (64140)
- Extensive Agriculture - Row Crops (18320)
- 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

0 Feet 800

RECON

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FIGURE 6b

Vegetation Communities/Land Cover Types and Sensitive Species Locations

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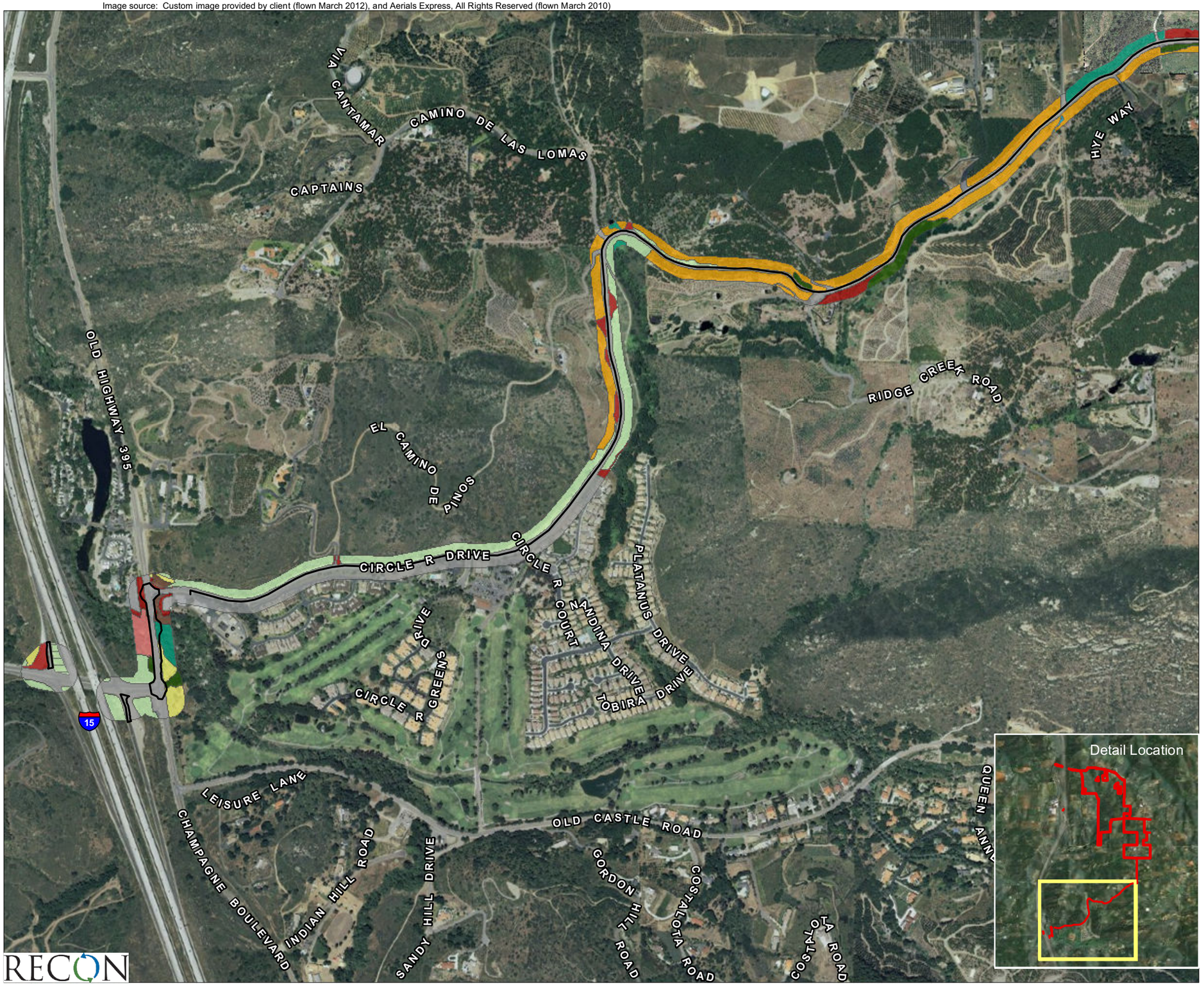
Image source: Custom image provided by client (flown March 2012), and Aerials Express, All Rights Reserved (flown March 2010)



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)

0 Feet 800

RECON

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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-leafed 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 is 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 (*Cortedaria* 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 vales. 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. CNDDB 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 ~~relatively~~ 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. CNDDB 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 ~~western~~ whiptail (*Aspidoscelis tigris stejnegeri~~Cnemidophorus multiscultatus tigris~~*) - 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 ~~western~~ 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 ~~Species of Special Concern~~ 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 Jurisdiction[1]	**43.52**
County of San Diego RPO Wetlands	**37.64**

[1]CDFG/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*).

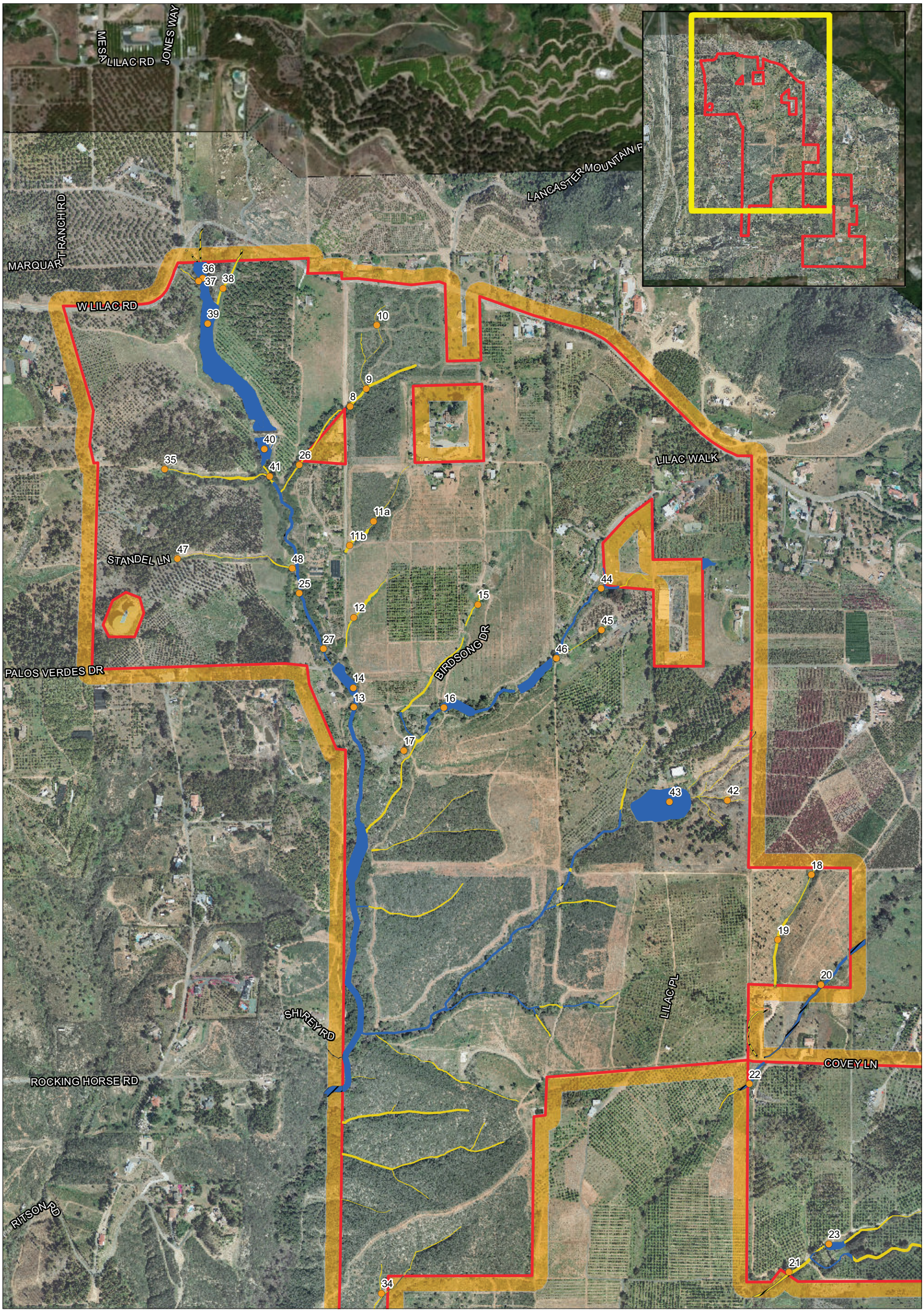
The habitat quality of the coast live oak riparian woodlands, southern willow riparian woodlands, and willow scrub habitats in the project area are generally high to moderate depending on the proximity of the wetland to agricultural activities. Canopy cover of the coast live oak woodland and willow woodland/scrub 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.

Image source: Custom image provided by client (flown March 2012), and Microsoft, All Rights Reserved (flown May 2010)



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

0 Feet 600

RECON

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FIGURE 7a

Location of USACE Waters of the U.S.

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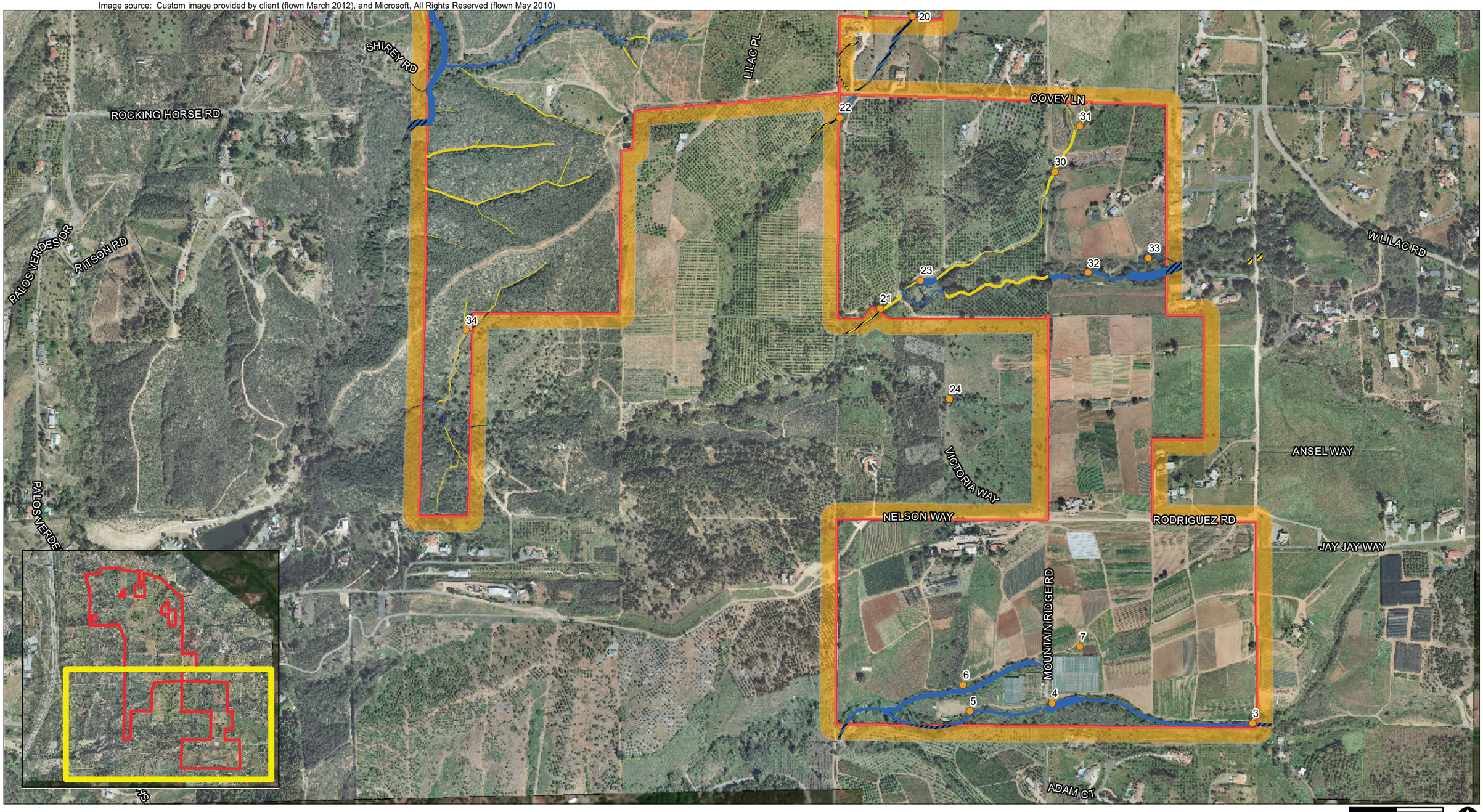

Project Boundary
100-ft. Survey Buffer
Delineation Sample Point
Wetland
Wetland - Off-site
Non-wetland Water
Non-wetland Water - Off-site

RECON

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FIGURE 7b

Location of USACE Waters of the U.S.

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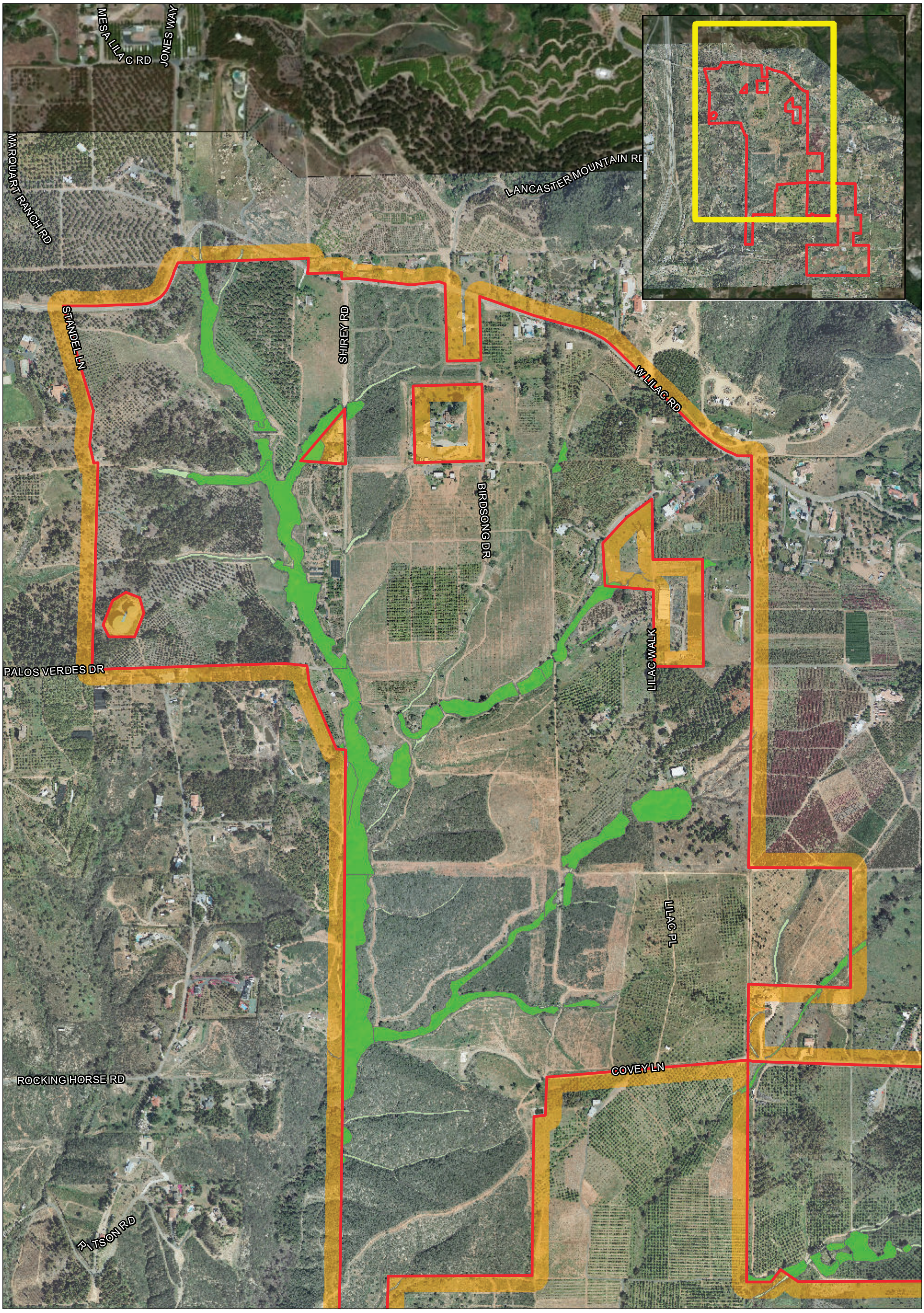

Project Boundary
100-ft. Survey Buffer
Wetland
Wetland - Off-site
Streambed
Streambed - Off-site

0 Feet 600

RECON

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FIGURE 8a

Location of CDFG/RWQCB State Waters

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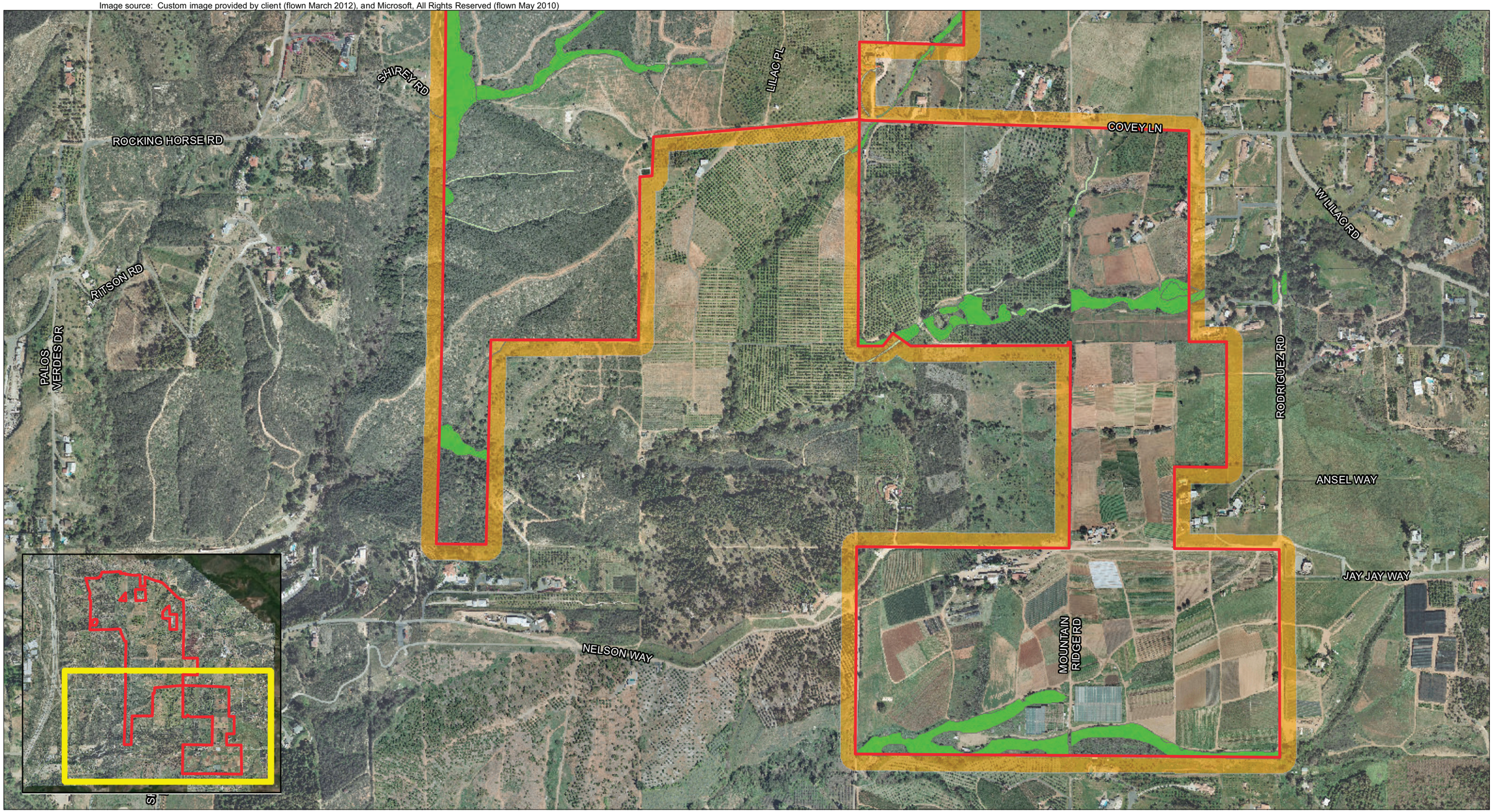

Project Boundary
100-ft. Survey Buffer
Wetland
Wetland - Off-site
Streambed
Streambed - Off-site

RECON

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FIGURE 8b

Location of CDFG/RWQCB State Waters

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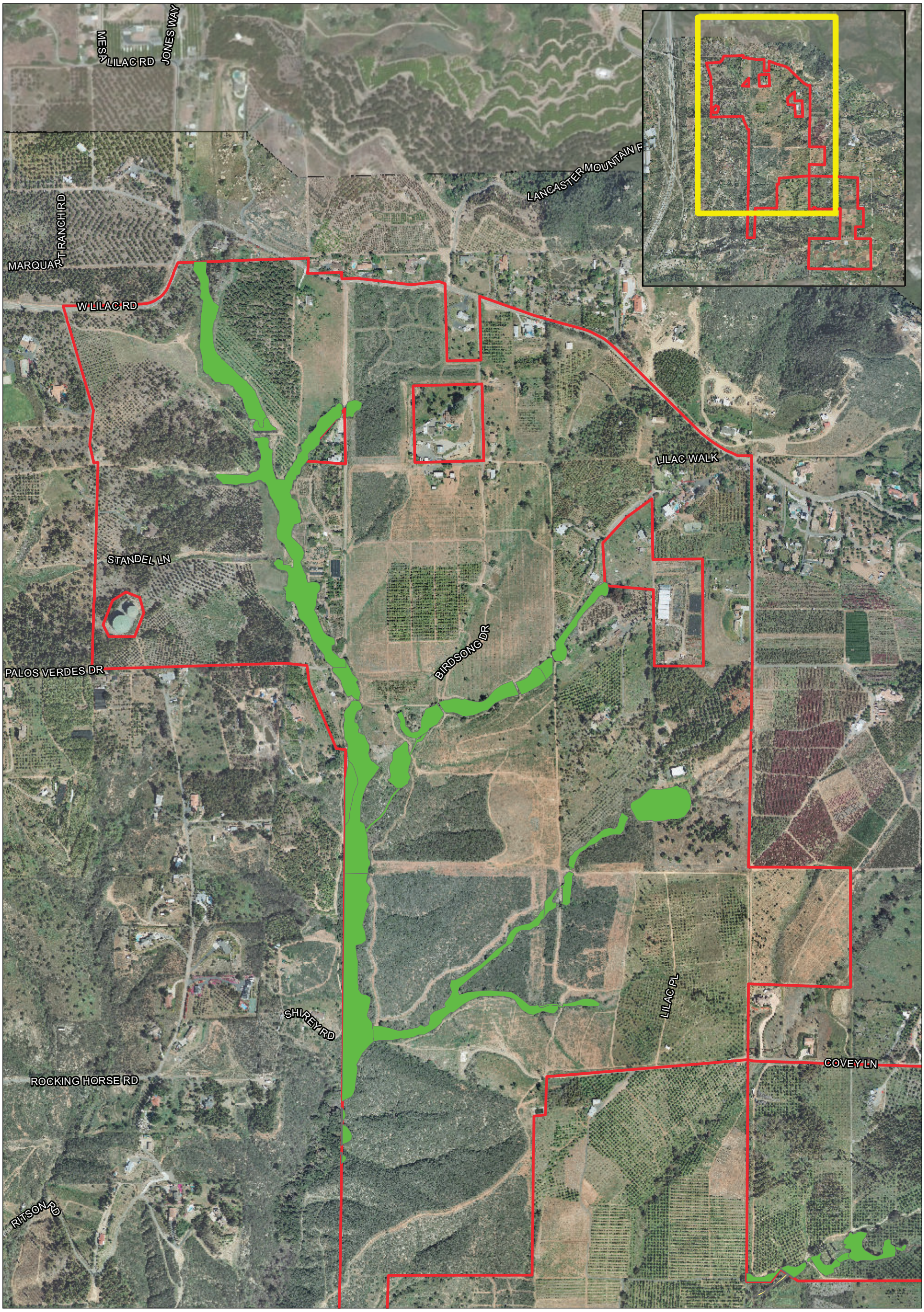

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FIGURE 9a

Location of County of San Diego RPO Wetlands

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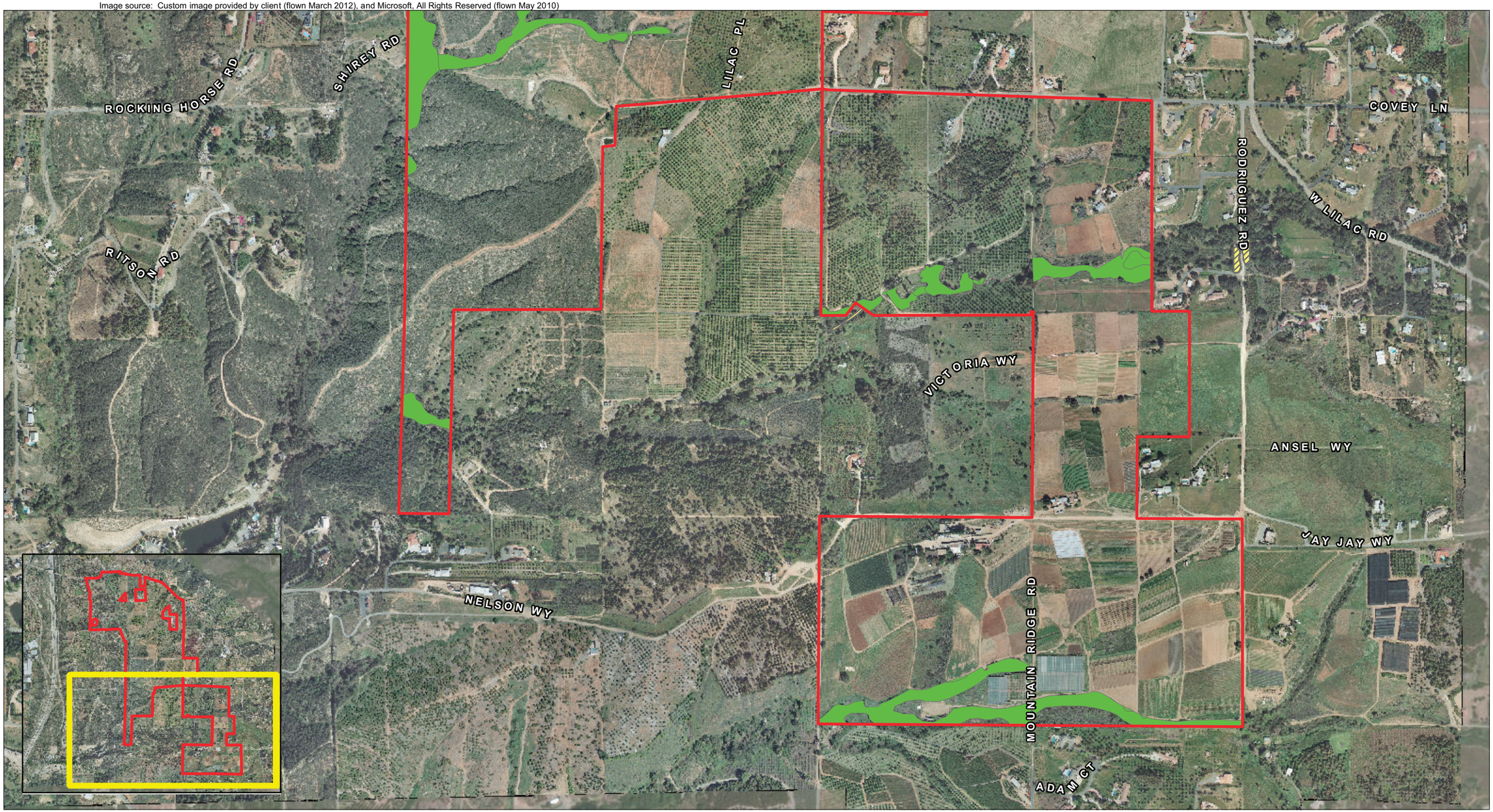

Project Boundary

County RPO Wetland

County RPO Wetland - Off-site

RECON

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FIGURE 9b

Location of County of San Diego RPO Wetlands

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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 Rodriquez 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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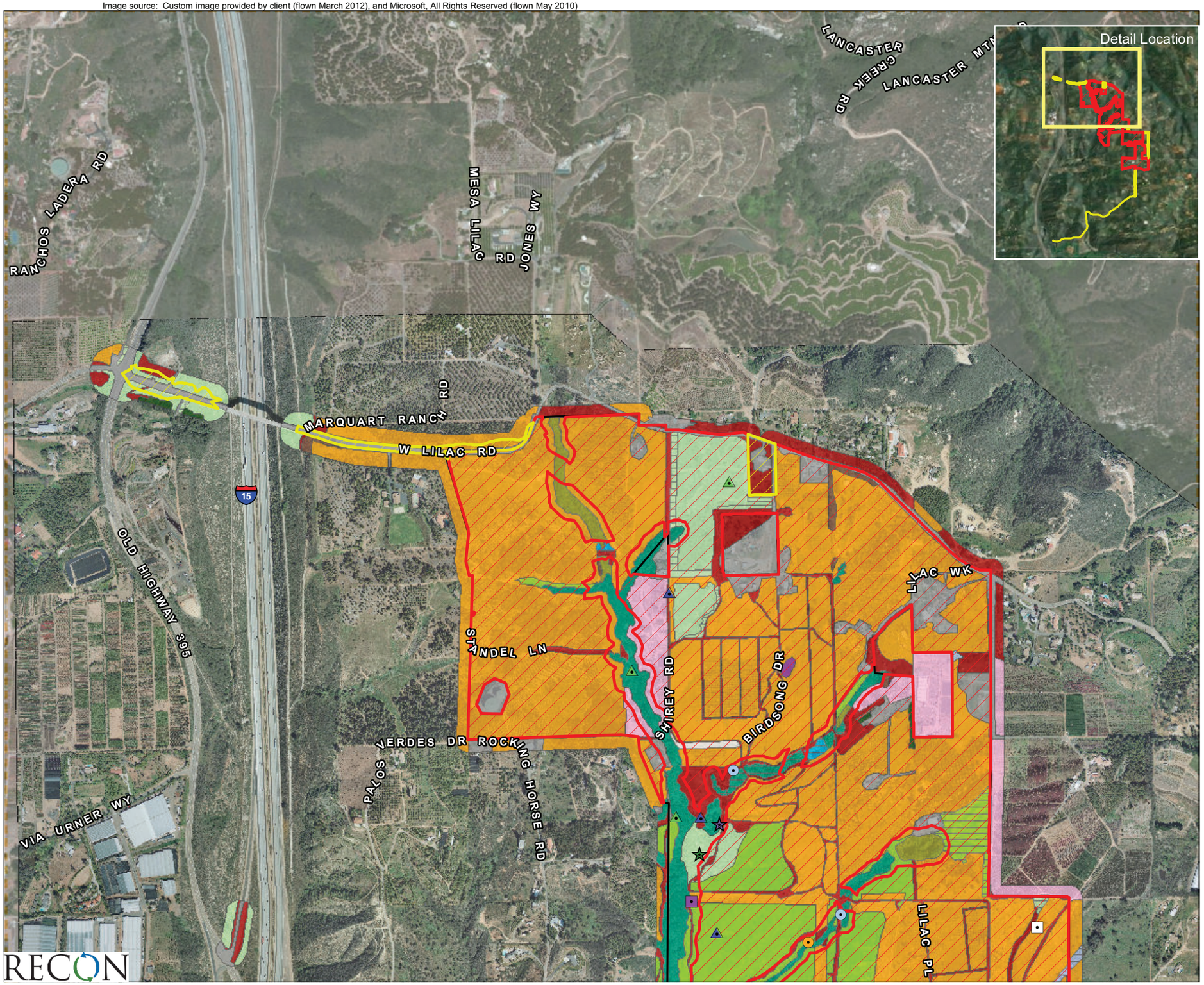

Project Boundary
Project Impacts
Off-site Improvement Areas

Vegetation Communities and Landcover Type

- Coastal Sage Scrub (32520)
- Disturbed Coastal Sage Scrub (32520)
- Coast Live Oak Woodland (71160)
- Disturbed Coastal/Valley Freshwater Marsh (52410)
- Eucalyptus Woodland (79100)
- Mule Fat Scrub (63310)
- 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 Riparian Woodland (62500)
- Southern Willow Scrub (63320)
- Disturbed Southern Willow Scrub (63320)
- Open Water - Fresh water Agricultue pond (64140)
- Intensive Agriculture - Nursery
- Orchard (18100)
- Vinyard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

Sensitive Species Observations

Birds
- Cooper's Hawk
- Turkey Vulture

Reptiles
- Orange-throated Whiptail
- Red Diamond Rattlesnake

Mammals
- Southern Mule Deer
- San Diego Blacktailed Jackrabbit

Plants
- Spiny Rush
- Engelmann Oak

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FIGURE 10a

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

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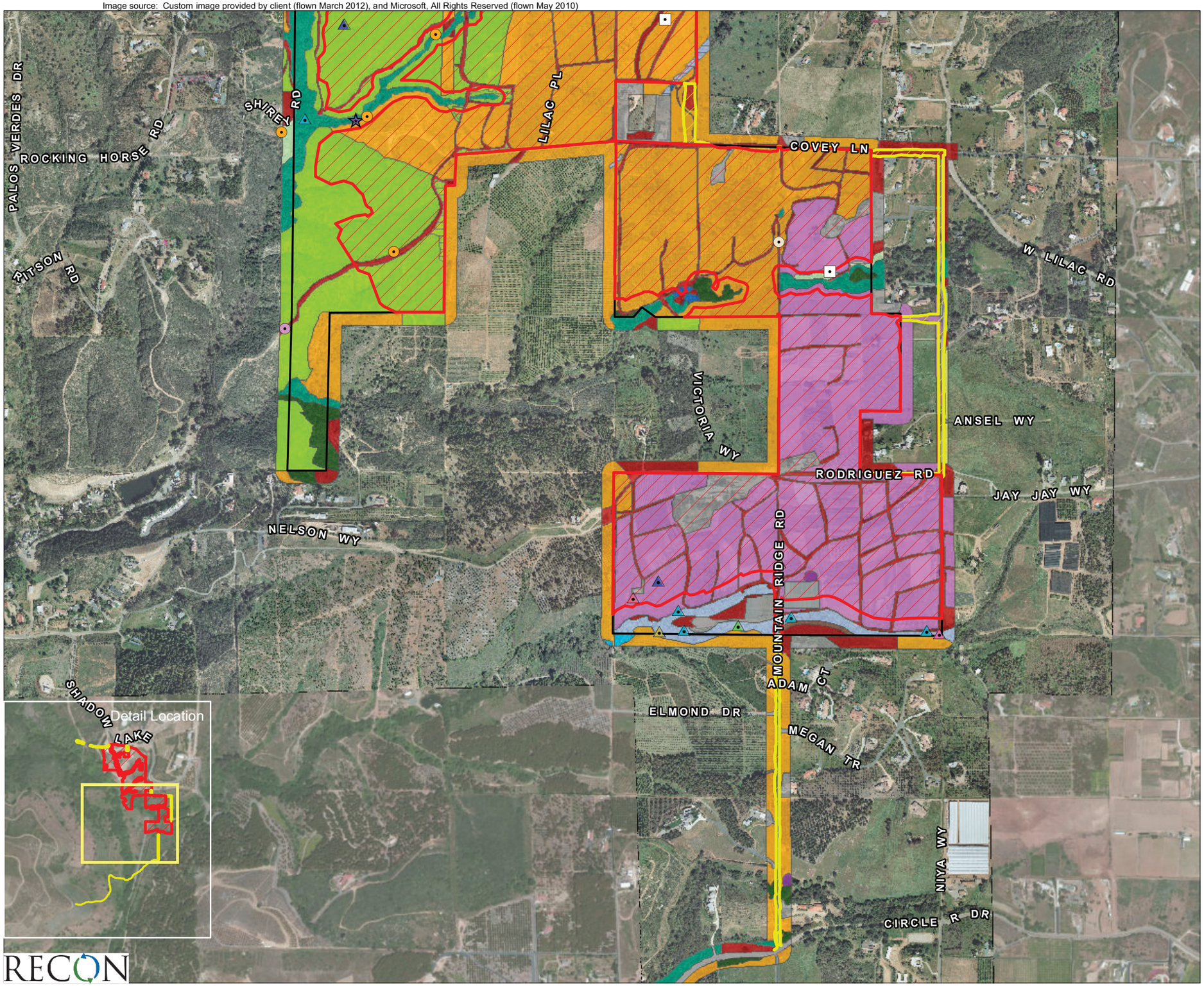

Project Boundary
Project Impacts
Off-site Improvement Areas

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 Agricultue 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

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FIGURE 10b

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

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Image source: Custom image provided by client (flown March 2012), and Microsoft, All Rights Reserved (flown May 2010)

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)

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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	~~7.4~~7.0	~~77.6~~77.5	~~85~~84.5
Intensive agriculture – nursery	9.2	1.3~~4~~	~~4.6~~4.7	~~0.7~~0.2	0	0	~~6.7~~6.2
Vineyard	0.7	0	0.6	0	0	0	0.6
Orchard	291.9	~~87.8~~87.4	50.7	94.4	40.8	3.1	276.4~~8~~
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.~~6~~1	72.~~4~~5	174.~~9~~4	53.40	96.~~1~~0	505.0~~4~~

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 Jurisdiction[1]	**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 Rodriquez 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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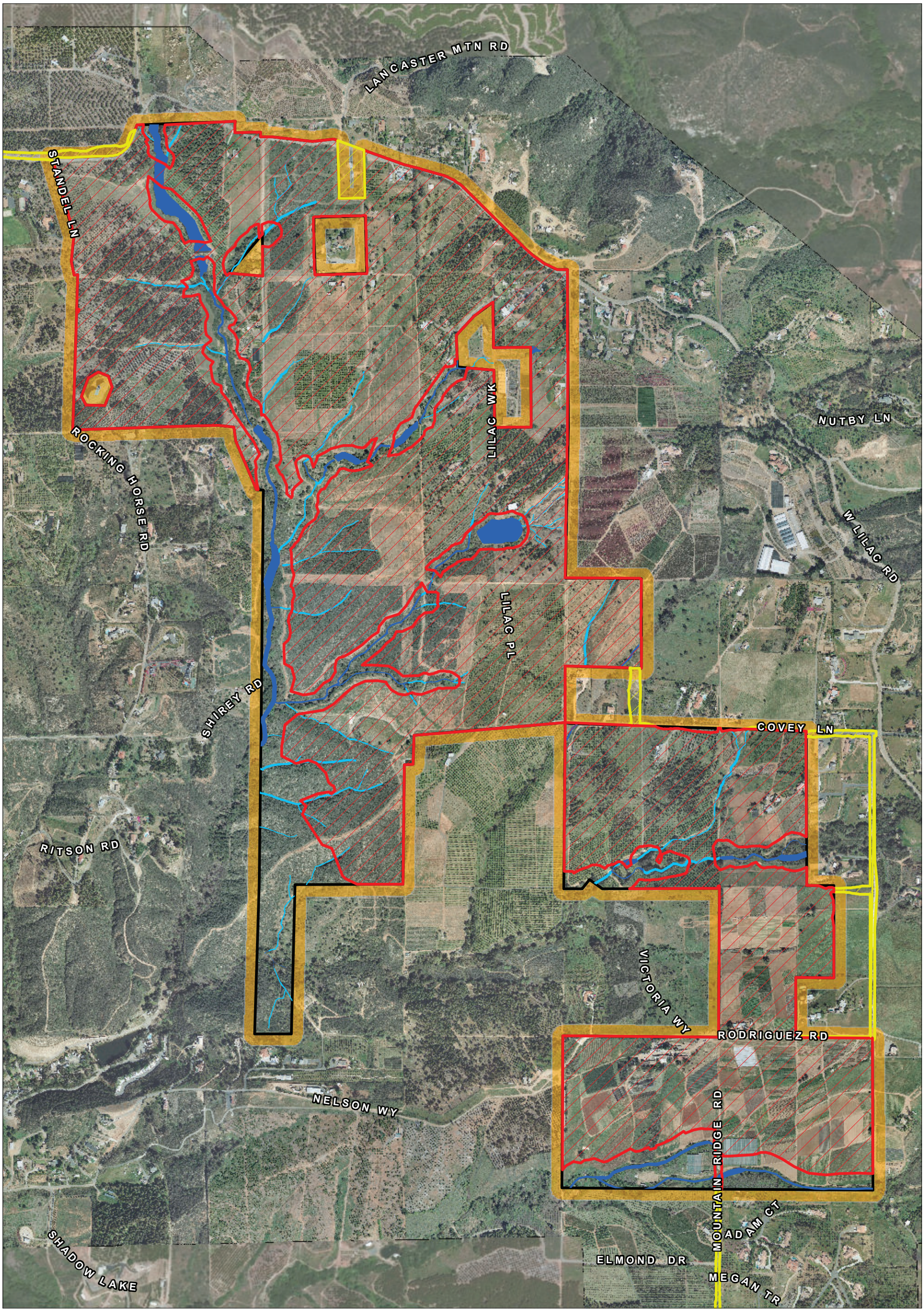

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FIGURE 11a

Impacts to USACE Waters of the U.S.

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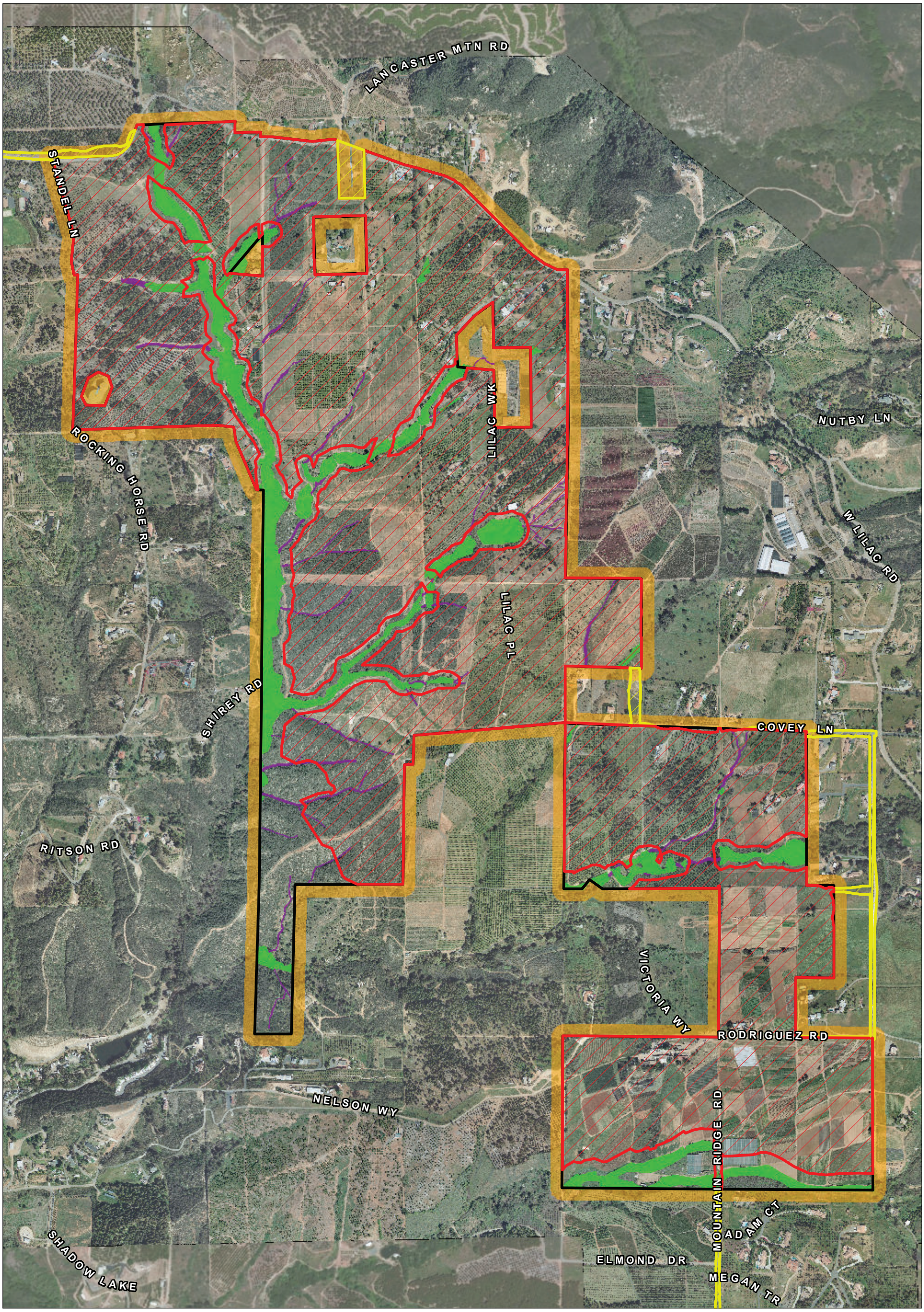

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FIGURE 11b

Impacts to CDFG/RWQCB State Waters

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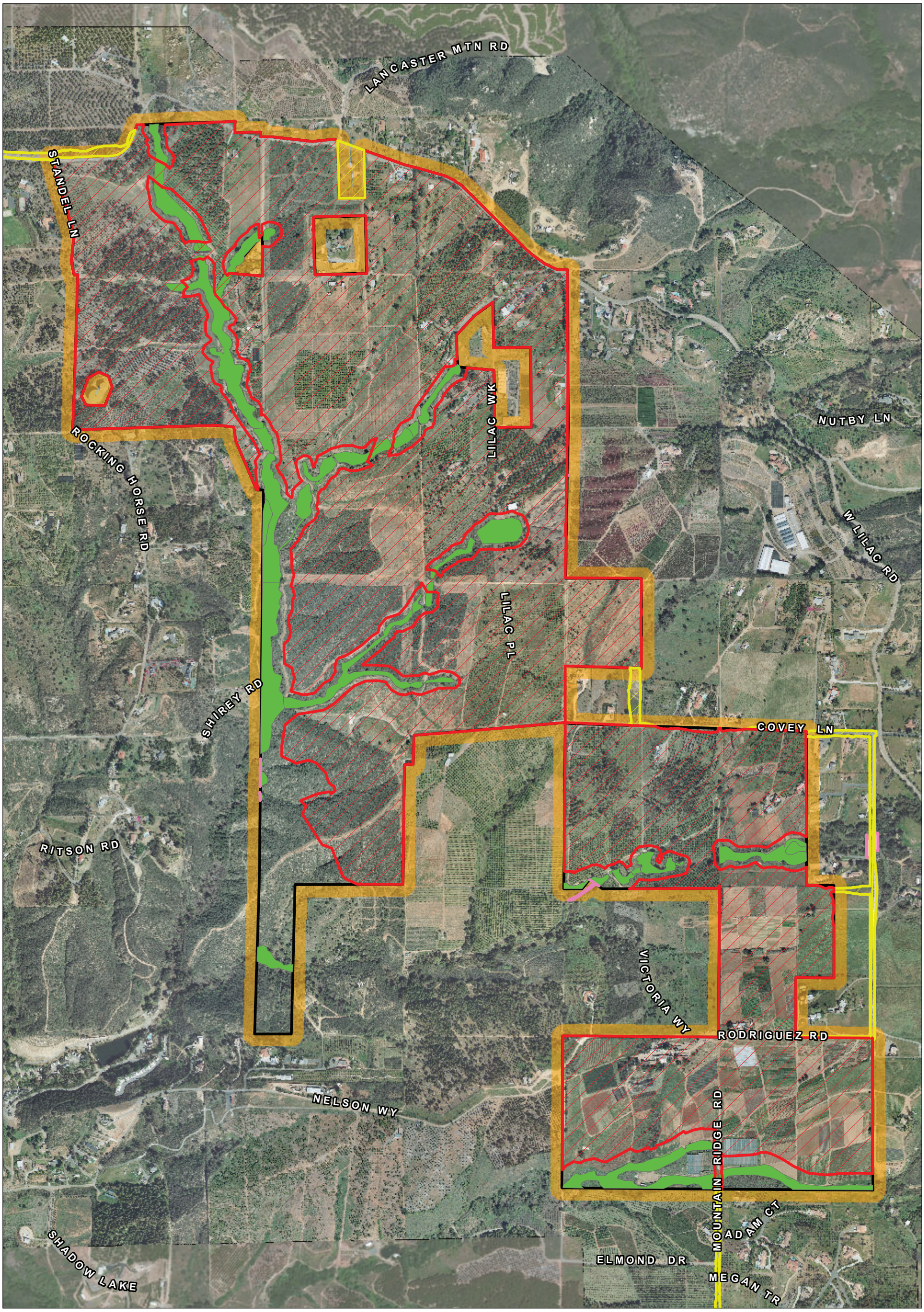

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FIGURE 11c

Impacts to County of San Diego RPO Wetlands

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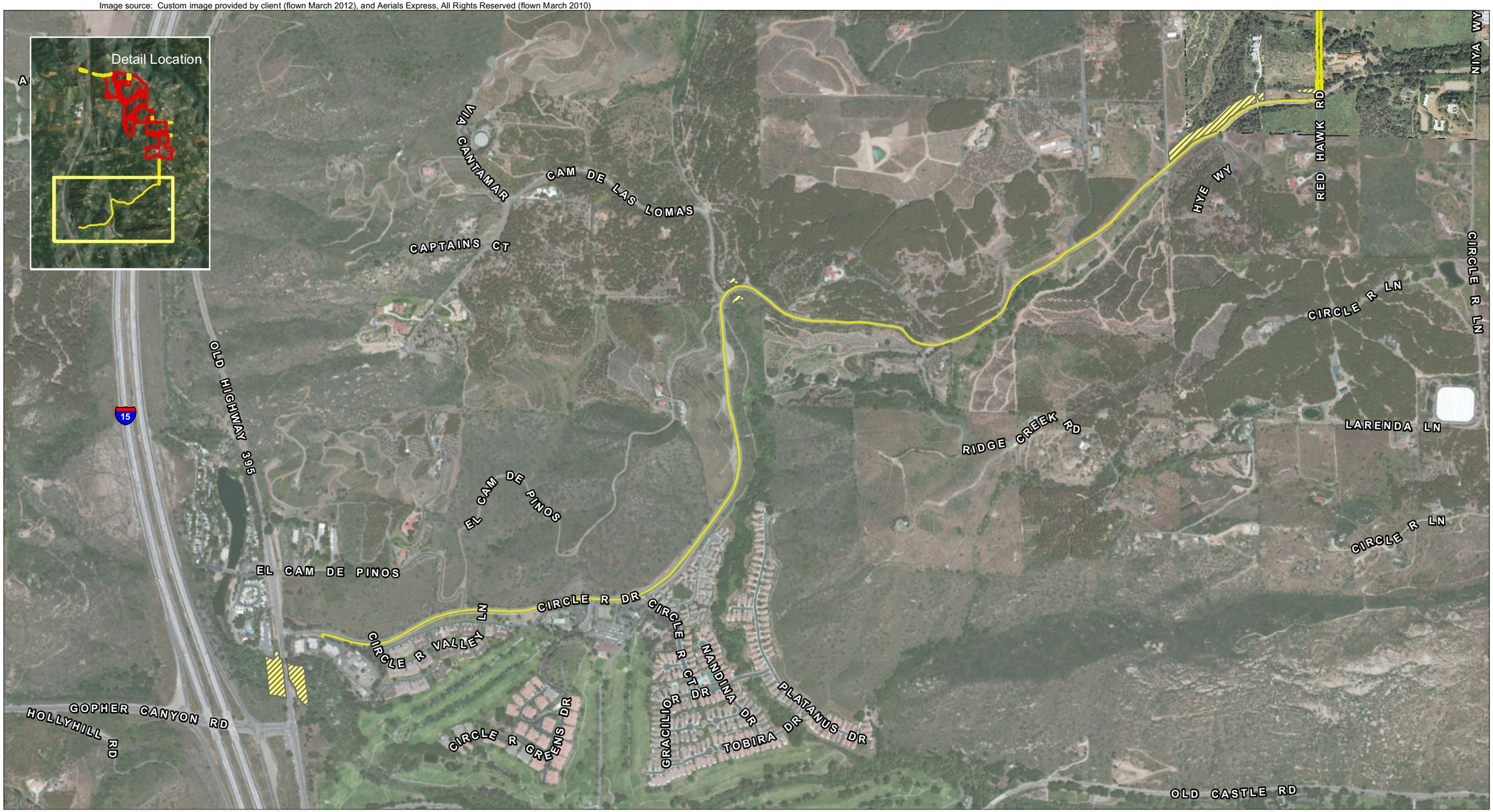

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Off-site Improvement Areas

County RPO, ACOE, CDFG Wetland - Off-site

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FIGURE 11d

Off-site Impacts to ACOE Waters of the U.S.,
CDFG State Waters, and County of San Diego RPO Wetlands

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2.3.2 Impacts to Sensitive Wildlife

Direct impacts to southern mixed chaparral, coastal sage scrub, southern coast live oak riparian woodland, southern willow riparian woodland/scrub and agricultural lands would reduce habitat for the following sensitive wildlife species: reptiles—red diamond rattlesnake, coastal ~~western~~ whiptail, orange-throated whiptail, and coast horned lizard on-site; birds—turkey vulture, western bluebird, white-tailed kite, Cooper's hawk, yellow warbler, yellow-breasted chat; and mammals—San Diego black-tailed jackrabbit and southern mule deer. These wildlife species may also forage within agricultural and disturbed lands adjacent to the native habitats listed above. Vegetation impacts as a whole would thus reduce the potential of the site to support sensitive wildlife species.

Indirect impacts to sensitive wildlife species that may remain after the project is completed would be the result of edge effects (i.e., noise, lighting, invasive plants, grading encroachments, etc.).

2.4 Impacts to Wildlife Corridors, Linkages, and Nursery Sites

The development of the project site would reduce the relatively large patches of southern mixed chaparral in the project area and increase fragmentation of the southern coast live oak riparian woodlands that form blocks native vegetation between regional habitat linkages to the north, south, and west. These impacts would reduce suitable habitat on-site that supports local populations of plant and wildlife species and they would reduce any potential natural habitat "stepping stone" connections for wildlife that can migrate between the larger regional connections. The local wildlife corridors identified on-site are not recognized as important regional linkages in the draft North County MSCP. However, impacts to the local wildlife corridors on-site would reduce any secondary corridor connections between the identified regional linkages to the north (Keys Canyon), south (Moosa Creek), and west (I-15 Escondido – Temecula), and confine them to local connections along the larger drainage courses not impacted by the project. Proposed off-site improvements to existing roads that would impact the regional linkages along I-15 would not disrupt these linkages. As discussed later in this report, the project, through off-site mitigation, may enhance regional habitat connectivity through the preservation of habitat within future North County MSCP PAMA lands.

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3.0 Special Status Species

A determination of the significance of direct and indirect impacts on special status species is presented in this section of the report. Guidelines for the determination of significance are applied to the proposed impacts to special status species anticipated by the project to determine significance under CEQA and County of San Diego guidelines.

3.1 Guidelines for Determination of Significance

The determination of the significance of impacts to special status species is made with regard to the following:

> The project would have a substantial adverse effect, either directly or indirectly or through habitat modifications, on a candidate, sensitive, or special status species listed in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (County of San Diego 2010).

3.2 Analysis of Project Effects

Each of the 12 categories of impacts identified in the County's significance determination guidelines for special status species is evaluated in this section.

3.2.1 Impacts to Federal and State Listed Species

No federal or state listed species would be impacted by the project.

3.2.2 Impacts to County List A or B Plants, County Group 1 Animals, or Species Listed as a State Species of Special Concern

3.2.2.1 Impacts to County List A or B Plant Species

No impacts to plant species that occur on the County List A or B would occur from the proposed project.

3.2.2.2 Impacts to County Group 1 Animals and Species of Special Concern

Direct and indirect impacts to native upland and riparian plant communities and agricultural lands would impact sensitive wildlife species primarily through habitat loss. Direct impacts would likely occur to species that are slow-moving, such as reptiles and small mammals, while direct losses of individuals are not anticipated for species that are more mobile, such as birds and large mammals. Four reptile species, seven bird species, and two mammal species that are considered Group 1 or Federal/State Species of Special Concern and have a high potential to be present on-site are evaluated as part of this impact analysis.

Belding's orange-throated whiptail – Direct impacts to southern mixed chaparral vegetation would likely result in impacts to this reptile species. The loss of up to four individuals would not be considered significant because of the relatively wide range of this lizard in San Diego County and that these Belding's orange-throated whiptail locations do not represent a significant regional population. Indirect impacts to individuals of this reptile that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

Coastal ~~western~~ whiptail – Direct impacts to southern mixed chaparral vegetation and the loss of orchard would likely result in impacts to this lizard species. The loss of at least one individual would not be considered significant because of the relatively wide range of this reptile in San Diego County and that the single coastal ~~western~~ whiptail observation does not represent a significant regional population. Indirect impacts to individuals of this lizard that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

Red diamond rattlesnake – Direct impacts to a variety of native vegetation communities and agricultural lands would likely result in impacts to this reptile species. The loss of up to two individuals would not be considered significant because of the relatively wide range of this snake in San Diego County and that these red diamond rattlesnake observations do not represent a significant regional population. Indirect impacts to individuals of this snake that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

Coast horned lizard – Direct impacts to southern mixed chaparral vegetation would likely result in impacts to this reptile species. While not observed on-site, there is a high potential for individuals of this species to be impacted through habitat loss. The number of individuals of coast horned lizard to be impacted is estimated to be less than five and would not be considered significant because of the relatively wide range of this lizard in San Diego County and that this coast horned lizard observation does not represent a significant regional population. Indirect impacts to individuals of this reptile that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

Cooper's hawk – Direct impacts to coast live oak riparian woodland, orchards, and coastal sage scrub have the potential to impact Cooper's hawk through habitat loss. No direct loss of individuals of Cooper's hawk is anticipated as these hawks will fly away from the direct disturbance, however, up to four Cooper's hawks would be displaced. These impacts to Cooper's hawk would not be considered significant given the relatively wide range of this bird species in San Diego County and that these observations do not represent a significant regional population. Indirect impacts to individuals of this hawk species that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

White-tailed kite – Direct impacts to southern willow scrub and adjacent agricultural fields and orchards in the southern portion of the site have the potential to impact white-tailed kite through habitat loss. No direct loss of individuals of white-tailed kite are anticipated as these birds will fly away from the direct disturbance, however, at least one pair of kites would be displaced. These impacts to white-tailed kite would not be considered significant given the relatively wide range of this bird species in San Diego County and that these observations do not represent a significant regional population. Indirect impacts to individuals of this kite species that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

Turkey vulture – Direct impacts to vegetation, in general, could have impacts on turkey vultures through habitat loss. No direct loss of individuals of turkey vulture are anticipated as these large birds will fly away from the direct disturbance, however, as many as three or more vultures would be displaced to surrounding areas. These impacts to turkey vulture would not be considered significant given the relatively wide range of

this bird species in San Diego County and that these observations do not represent a significant regional population. Indirect impacts to individuals of this vulture species that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

Loggerhead shrike – Direct impacts to orchards and native uplands and riparian habitats on-site have the potential to impact the loggerhead shrike through habitat loss. No direct loss of individuals of loggerhead shrike is anticipated as these birds will fly away from the direct disturbance, however, at least one loggerhead shrike would be displaced. These impacts to loggerhead shrike would not be considered significant given the relatively wide range of this bird species in San Diego County and that these observations do not represent a significant regional population. Indirect impacts to individuals of this shrike species that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

Western bluebird – Direct impacts to orchards and native uplands and riparian habitats on-site have the potential to impact the western bluebird through habitat loss. No direct loss of individuals of western bluebird is anticipated as these birds will fly away from the direct disturbance, however, at least one western bluebird would be displaced. These impacts to western bluebird would not be considered significant given the relatively wide range of this bird species in San Diego County and that these observations do not represent a significant regional population. Indirect impacts to individuals of this bluebird species that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

Yellow warbler – Direct impacts to coast live oak riparian woodlands and southern willow riparian woodland/scrub on-site have the potential to impact the yellow warbler through habitat loss. No direct loss of individuals of yellow warbler is anticipated as these birds will fly away from the direct disturbance, however, at least one yellow warbler could be displaced. These impacts to yellow warbler would not be considered significant given the relatively wide range of this bird species in San Diego County and that these observations do not represent a significant regional population. Indirect impacts to individuals of this warbler species that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These

indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

Yellow-breasted chat – Direct impacts to coast live oak riparian woodlands and southern willow riparian woodland/scrub on-site have the potential to impact the yellow-breasted chat through habitat loss. No direct loss of individuals of yellow-breasted chat is anticipated as these birds will fly away from the direct disturbance; however, up to five individuals of yellow-breasted chat could be displaced. These impacts to yellow-breasted chat would not be considered significant given the relatively wide range of this bird species in San Diego County and that these observations do not represent a significant regional population. Indirect impacts to individuals of this bird species that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

San Diego black-tailed jackrabbit – Direct impacts to coastal sage scrub and agricultural areas on-site would impact San Diego black-tailed jackrabbit through habitat loss. There is the potential for the direct loss of individuals of San Diego black-tailed jackrabbit as these rabbits may not always be able to avoid construction equipment. At least two San Diego black-tailed jackrabbits could be displaced. These impacts to San Diego black-tailed jackrabbit would not be considered significant given the relatively wide range of this rabbit species in San Diego County and that these observations do not represent a significant regional population. Indirect impacts to individuals of this rabbit species that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

San Diego desert woodrat – Direct impacts to coastal sage scrub, southern mixed chaparral, and coast live oak riparian woodland vegetation on-site would impact San Diego desert woodrats through habitat loss. There is the potential for the direct loss of individuals of San Diego desert woodrat as these animals may not always be able to avoid construction equipment. There is the potential for the direct loss of up to 10 or more San Diego desert woodrat nests. These impacts to San Diego desert woodrat would not be considered significant given the relatively wide range of this woodrat species in San Diego County and that these observations do not represent a significant regional population. Indirect impacts to individuals of San Diego woodrat that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered

significant as the number of individuals of this species to remain after implementation of the project is likely low and would not represent a regionally significant population.

3.2.3 Impacts to County List C or D Plants, County Group 2 Animals Species

Direct and indirect impacts to three plants species on List C or D of the County would occur from the project. Direct and indirect impacts to wildlife in Group 2 of the County are addressed above as all of these species are also listed as Federal or State Species of Special Concern.

Prostrate spineflower: Direct impacts to southern mixed chaparral on-site could result in the direct loss of up to 100 individuals of prostrate spineflower. This loss of individuals of prostrate spineflower would not be considered significant as the overall population numbers do not appear to be great enough to consider this location a significant regional population. Indirect impacts to individuals of prostrate spineflower that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is likely low and this species regularly occupies disturbed areas (Reiser 2001).

Southwestern spiny rush: No direct impacts to the approximately 20 individuals of southwestern spiny rush that were observed on-site are anticipated as the project would avoid impacting the drainage course where this species was observed. Therefore, no significant direct impacts to this species would occur. Indirect impacts to individuals of southwestern spiny rush that remain in project open space areas would be the result of edge effects due to the proximity of development to occupied habitat. These indirect impacts would not be considered significant as the number of individuals of this species to remain after implementation of the project is relatively low and not enough to consider this location a significant regional population.

Engelmann oak: No direct impacts to the three Engelmann oak trees that were observed within the coast live oak riparian woodlands on-site would occur. These trees are located within riparian habitat to be preserved by the project. Therefore, no significant direct impacts to this species would occur. Indirect edge effect impacts to the three trees may occur due to the proximity of development to the open space area. These indirect impacts would not be considered significant as the number of individuals is not enough to consider this location a significant regional population.

3.2.4 Impacts to Arroyo Toad Aestivation, Foraging, or Breeding Habitat

The proposed project would not impact any habitat used by the arroyo toad for aestivation, foraging, or breeding. The habitat assessment for arroyo toad conducted for the project site concluded that no suitable habitat for the arroyo toad is present. The nearest known arroyo toad location is in excess of a mile away to the north of the project in Keys Canyon, and this location is separated from the project site by very steep slopes, orchards, and West Lilac Road.

3.2.5 Impacts to Golden Eagle Habitat

The project site does not contain suitable nesting habitat for golden eagle. Golden eagles typically nest on cliffs or in deciduous and coniferous trees at higher elevations (USFWS 2010). The nearest known sighting of golden eagle is approximately 4.5 miles to the northeast near Pala Mountain and around the San Luis Rey River valley (State of California, 2007d). It is not known if nesting activity was observed at this location; however, the proposed project is over 4,000 feet from this known occurrence and therefore would not likely impact golden eagle habitat.

3.2.6 Impacts to Nesting and Functional Foraging Habitat for Raptors

Direct impacts to relatively large acreages of native vegetation areas and agricultural lands would result in the loss of functional nesting and foraging habitat for raptors, such as Cooper's hawk, white-tailed kite, turkey vulture, and red-tailed hawk. This impact would be considered significant, especially if impacts to habitat are to occur during the raptor breeding season (January 15–July 15). Potential indirect impacts to any functional nesting raptor foraging habitat that remains on-site or adjacent to the project would be the result of edge effects, particularly construction noise impacts on nesting/breeding behaviors. These types of indirect impacts may be significant.

3.2.7 Impacts to Core Wildlife Area

The proposed project is not within or part of a core wildlife area as identified in the draft North County MSCP. Portions of proposed off-site improvement areas are within the core wildlife areas along the I-15 corridor. These off-site impacts would be the result of improvements (e.g., widening) of existing roads and freeway on/off ramps. These impacts would not disrupt the functions of these core wildlife areas.

3.2.8 Assessment of Indirect Impacts to Proposed and Existing Open Space Areas

The proposed open space areas within the project area would be confined to the drainage courses that are being avoided. These open space areas are narrow and mostly surrounded by development except along the western and southern boundary of the project. Sources of indirect impacts to these open space areas would result from increased human access, potential increases in predation/competition on native wildlife from domestic animals, potential increases in invasive plant species or other domestic pests, alterations to natural drainage patterns, potential noise effects, and potential effects on wildlife species due to increases in night time lighting. Sensitive riparian bird species may be the most affected by these edge effects. Habitat quality, functions, and values would likely decrease also. Therefore, the potential indirect impacts to proposed open space area would be considered significant, but could be mitigated through the establishment of wetland buffers as discussed below.

The project would provide a minimum of a 50-foot buffer around the wetlands that are being preserved within the on-site biological open space. This wetland buffer in combination with the adjacent 100-foot limited building zone outside of the biological open space boundary would be sufficient to avoid and minimize any potential indirect impacts to the wetlands, protecting the function and value of the preserved wetland habitat.

Permanent fences would be built on property lines where lots occur adjacent to biological open space to deter encroachment into the open space area. Fences would also be placed at trail heads and staging areas to avoid impacts to adjacent areas and signs would notify pedestrians on the sensitive nature of the open space being entered. Signs would be placed along trails within or bordering biological open space areas at intervals of 200 feet to remind pedestrians of the biological sensitivity of the habitats being protected and to remain on the existing trails at all times. A conceptual trail and signage plan is provided in Attachment 14.

Existing open space areas outside of the project are mostly confined to steep slopes and the larger drainage courses. The majority of the surrounding land is under some sort of agricultural activity and thus not a lot of natural open space areas remain adjacent to the project. There is some native habitat off-site to the southwest along the extension of the major drainage course and adjacent slopes that have some upland chaparral and riparian habitat.

3.2.9 Impacts to Burrowing Owl Habitat

The habitat assessment conducted for burrowing owl concluded that there was a low probability of occurrence for burrowing owl because the habitats present on the site were

not suitable for this species. No impacts to burrowing owl or their habitat are anticipated from the project.

3.2.10 Impacts to Cactus Wren Habitat

The habitat assessment conducted for cactus wren concluded that there was a low probability of occurrence for this species in the project area because no suitable habitat occurs on the site. No impacts to occupied or formerly occupied cactus wren habitat are anticipated from the project.

3.2.11 Impacts to Hermes Copper Habitat

The habitat assessment for Hermes copper butterfly conducted in the project area concluded that there is a low probability for this species to occur on the site due to lack of suitable habitat. Hermes copper butterfly typically requires a spiny redberry shrub density of 60 to 95 percent, and a nectar source like buckwheat within 3 to 4 meters (Faulkner et al. 2012). While the site has spiny redberry shrubs, these shrubs occur as highly scattered individuals and lack the size and density associated with habitat that would likely support the species. No Hermes copper butterfly individuals were observed on the site. Therefore, no impacts to Hermes copper butterfly or their habitat are anticipated from the project.

3.2.12 Impacts to Sensitive Bird Nesting

No impacts to nesting activities are anticipated for the following sensitive bird species: coastal cactus wren, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, golden eagle, or light-footed clapper rail. None of these sensitive bird species were observed on the site and most species lack suitable habitat on the site.

Tree-nesting and ground-nesting raptors were observed on-site; therefore, there is the potential for impacts to nesting activities to occur during grading, clearing, fire fuel modification, and noise during construction. These types of direct and indirect impacts may be significant without measures to avoid impacts during the breeding season.

3.3 Cumulative Impact Analysis

Cumulative impacts from the proposed project were evaluated with regards to past, present, and future projects within the ~~local~~ cumulative study area. As the project is not located within an adopted MSCP, the cumulative study area was determined based on the localized habitat area in accordance with the County's Report Format and Content Requirements Biological Resources (County of San Diego 2010). The localized habitat area was defined by topography and man-made features that reduce wildlife movement

and generally create a local wildlife ecoregion. The features include the steep hillsides and ridgelines located to the north of West Lilac Road and Old Castle Road, I-15, and Blankinton Airport. The cumulative study area boundary ranges from one to two miles around the project site and is illustrated in Figure 12. ~~Eight~~ Within this cumulative study area, 12 projects were identified for the evaluation of cumulative impacts (Table 7).

The habitats located on the cumulative project sites were determined based on the draft North County MSCP vegetation mapping (County of San Diego 2009) and aerial photographs. This determination of habitats was done to complete a qualitative cumulative analysis and no field surveys of the cumulative project sites were completed. ~~Review of aerial photography of these eight parcels show that the~~ The cumulative projects sites contain mainly ~~majority of the impacts from these projects will be to~~ agricultural lands (e.g., orchards, row crops) and smaller areas of native habitats (see Table 7) ~~and little to no impacts to native upland or riparian habitats (Figure 12)~~. Cumulative project sites 1 (Marquart Ranch), 2 (Rockefeller), 3 (Champagne Lakes), 5 (Gangavalli), 6 (Goodnight Ranchos), 7 (McBride), 10 (Nichols Whitman), 11 (Robinson), and 12 (Sukup) are all currently agricultural sites. Cumulative sites 8 (Moddelmoa) and 9 also contain urban and agricultural uses, but half of site 8 remains as southern mixed chaparral and a fourth of site 9 contains coast live oak woodland and non-native grassland. Cumulative site 4 (Fitzpatrick), has the most native vegetation remaining of all the cumulative sites, and is partially developed as an RV park with the remaining area consisting of southern mixed chaparral, Diegan coastal sage scrub, coast live oak woodland, freshwater, and southern willow scrub.

As the project would have no impact related to the following special status species, the project would have no contribution to cumulative impacts to such species or habitat: federal or state listed species, County List A, B or C Plants, arroyo toad breeding habitat, golden eagle habitat; core wildlife areas, burrowing owl habitat, cactus wren habitat, or Hermes copper habitat. Thus, the project would not have a significant cumulative impact related to those special status species. The remaining special status species impacts are addressed further below to determine if the project's incremental contribution would significantly add to a cumulatively considerable impact.

3.3.1 Cumulative Impacts to Group 1 or Federal/State Species of Special Concern

The project would have less than significant impacts to Belding's orange-throated whiptail, coastal whiptail, red diamond rattlesnake, coast horned lizard, Cooper's hawk, white-tailed kite, turkey vulture, loggerhead shrike, western bluebird, yellow warbler, yellow-breasted chat, San Diego black-tailed jackrabbit, and San Diego desert woodrat. Given the habitats these species are typically found in, the cumulative projects have potential to result in impacts to these species as well.

Image source: SanGIS (flown May 2012)

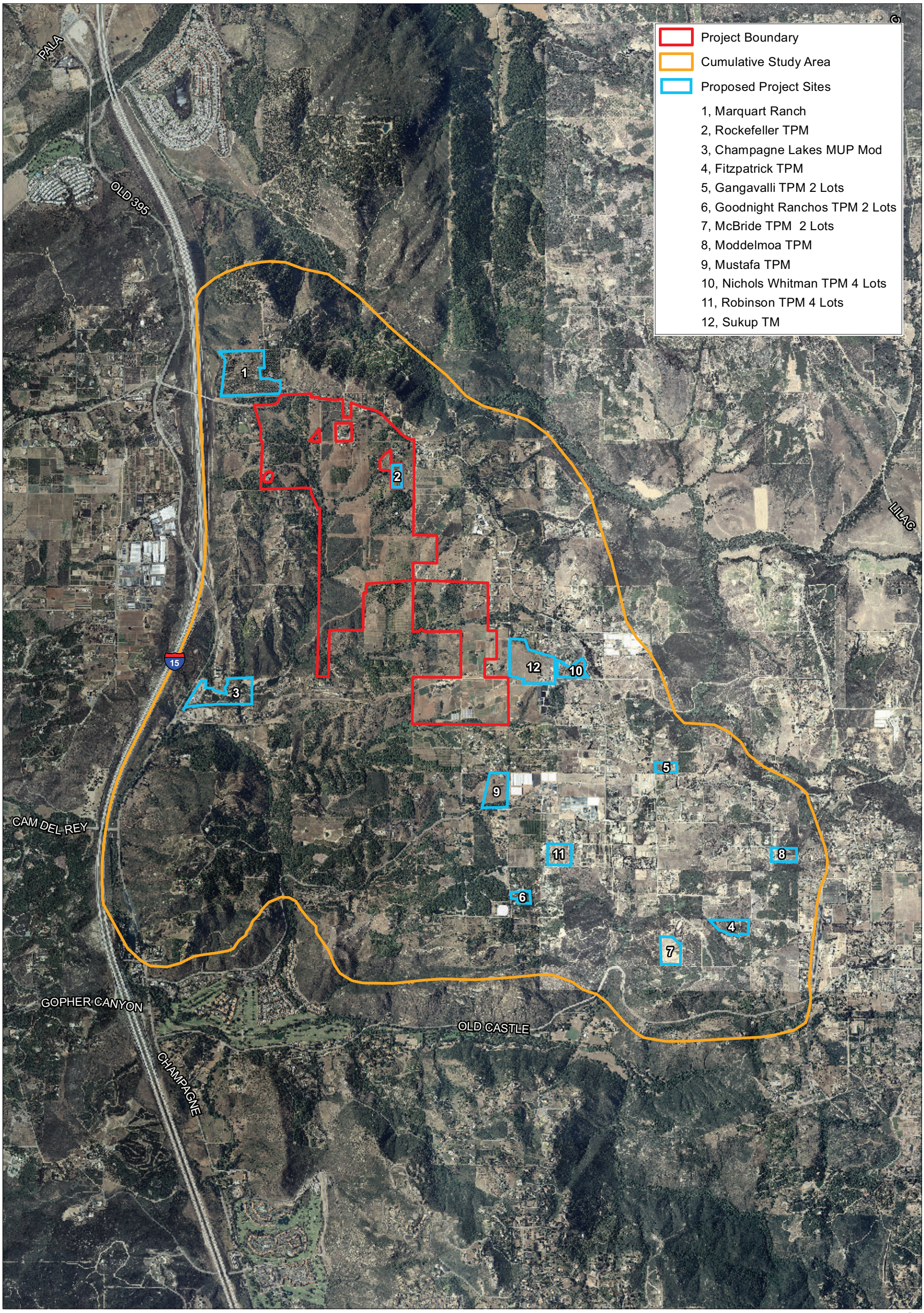

FIGURE 12

Location of Project Considered for Cumulative Impacts

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NEW TABLE 7
CUMULATIVE PROJECT LIST[1]

Map Key #	Project	Project Description	Project Reference Numbers	Area (acres)	Location	Habitat Types Present[2]	Species Potentially Present[3]
1	Marquart Ranch	9 single-family lots. Includes improvements to West Lilac Road and Mesa Lilac Road, and drainage improvements.	TM 5410	44.2	West Lilac Road and Mesa Lilac Road, Bonsall APNs: 125-232-29-00 and 125-232-32-00	agriculture (orchard) developed	Red diamond rattlesnake Cooper's hawk western bluebird San Diego black-tailed jackrabbit loggerhead shrike turkey vulture
2	Rockefeller TPM	2 lots	TPM 20596	5	9590 Lilac Way	agriculture (nursery and greenhouses) developed	Red diamond rattlesnake Cooper's hawk western bluebird San Diego black-tailed jackrabbit loggerhead shrike turkey vulture
3	Champagne Lakes, MUP, Mod	Modification for the relocation of 51 RV spaces and one mobile home space to include full hookups to 20 RV spaces, a new restroom, and an area screened by landscaping for vehicle storage.	06-0055819		8310 Nelson Way	developed Diegan coastal sage scrub coast live oak woodland freshwater southern willow scrub southern mixed chaparral	Belding's orange-throated whiptail Coastal whiptail Red diamond rattlesnake Coast horned lizard Cooper's hawk white-tailed kite western bluebird Yellow warbler yellow-breasted chat San Diego black-tailed jackrabbit San Diego desert woodrat loggerhead shrike turkey vulture spiny rush Engelmann oak prostrate spineflower
4	Fitzpatrick TPM	The project is a minor subdivision of a 10.8-acre parcel currently being used for agriculture (avocado grove). The project proposes to develop four residential lots ranging in size from 2.3 to 3.1 acre.	04-0023583	10.8	Tomsyl Road	agriculture (orchard)	Red diamond rattlesnake Cooper's hawk western bluebird San Diego black-tailed jackrabbit loggerhead shrike turkey vulture

NEW TABLE 7
CUMULATIVE PROJECT LIST[1]
(continued)

Map Key #	Project	Project Description	Project Reference Numbers	Area (acres)	Location	Habitat Types Present[2]	Species Potentially Present[3]
5	Gangavalli TPM	The project proposes to divide 5.05 net acres into 2 parcels measuring 2.51 acres gross (2.29 acres net), and 2.51 acres gross (2.45 acres net).	07-0086629 TPM 21101	5.05	10418 King Sanday Lane APN 129-212-24-00	agriculture (orchard)	Red diamond rattlesnake Cooper's hawk western bluebird San Diego black-tailed jackrabbit loggerhead shrike turkey vulture
6	Goodnight Ranchos, TPM,	The project proposes to divide 5.0 acres into 2 parcels measuring 2.45 acres net each. The proposed parcels will have frontage upon Circle R Lane.	06-0058961	5.0	30359 Circle R Lane APN 129-310-36-00	agriculture (orchard) developed	Red diamond rattlesnake Cooper's hawk western bluebird San Diego black-tailed jackrabbit loggerhead shrike turkey vulture
7	McBride, TPM	2-lot residential subdivision	07-0086911		29945 Spearhead Trail	Agriculture developed disturbed	Red diamond rattlesnake Cooper's hawk western bluebird San Diego black-tailed jackrabbit loggerhead shrike turkey vulture
8	Moddelmoa TPM	Tentative Parcel Map to subdivide 21.1 acres into 4 parcels and a remainder.	04-13025	21.1	30455 and 30463 Roadrunner Ridge South	agriculture, developed southern mixed chaparral	Belding's orange-throated whiptail Coastal whiptail Red diamond rattlesnake Coast horned lizard Cooper's hawk San Diego black-tailed jackrabbit San Diego desert woodrat loggerhead shrike turkey vulture prostrate spineflower

NEW TABLE 7
CUMULATIVE PROJECT LIST[1]
(continued)

Map Key #	Project	Project Description	Project Reference Numbers	Area (acres)	Location	Habitat Types Present[2]	Species Potentially Present[3]
9	Mustafa TPM	Tentative Parcel Map to subdivide 16.4 acres into 4 parcels and a remainder.	04-11418	16.4	9770 Circle R Road APN 129-390-17-00	agriculture (row crops) coast live oak woodland non-native grassland	Coastal whiptail Red diamond rattlesnake Cooper's hawk white-tailed kite western bluebird Yellow warbler yellow-breasted chat San Diego black-tailed jackrabbit loggerhead shrike turkey vulture spiny rush Engelmann oak
10	Nichols Whitman TPM	TPM 4 Lots	05-0045920		10015 W Lilac Road	agriculture (orchard) developed	Red diamond rattlesnake Cooper's hawk western bluebird San Diego black-tailed jackrabbit loggerhead shrike turkey vulture
11	Robinson TPM	4 single-family residential lots	07-0087850		10127 Circle R Drive	agriculture developed	Red diamond rattlesnake western bluebird San Diego black-tailed jackrabbit loggerhead shrike turkey vulture
12	Sukup TM	Tentative Map to subdivide 24.62 gross acres into 9 single-family residential lots ranging in size from 2.02 to 2.90 net acres.		24.62		agriculture (field/pasture) developed	Red diamond rattlesnake western bluebird San Diego black-tailed jackrabbit loggerhead shrike turkey vulture

[1]As the following projects were either withdrawn or expired, they are not included in the cumulative impact analyses: Kehne residence (05-0045714), and Lilac Ridge (TPM 20996).

[2]The habitats located on the cumulative project sites were determined based on the draft North County MSCP vegetation mapping (County 2009) and aerial photographs. No vegetation mapping of cumulative project sites was completed as a part of this analysis.

[3]The potential species located on the cumulative project sites were determined based the habitats present. No site-specific assessments or surveys were completed as a part of this analysis.

All of the cumulative sites have potential to provide habitat for red diamond rattlesnake, Cooper's hawk, western bluebird, San Diego black-tailed jackrabbit, loggerhead shrike and turkey vulture. Belding's orange-throated whiptail, coast horned lizard, and San Diego desert woodrat also have potential to occur within southern mixed chaparral on cumulative project sites 3 and 8. Coastal whiptail has potential to occur within southern mixed chaparral and coast live oak woodland on cumulative sites 3, 8, and 9. White-tailed kite, yellow warbler, and yellow-breasted chat have potential to occur with coast live oak woodland on cumulative sites 3 and 9.

The project impacts to these species combined with the loss as a result of the cumulative projects would not jeopardize the local long-term survival of these species given their abundance and the habitat remaining within the local area. All projects would be required to comply with sensitive habitat mitigation requirements of the County and Resource Agencies (e.g., NCCP, HLP Ordinance, and County Biological Guidelines), which would increase the cumulative amount of protected habitat that supports special status species. Thus, the cumulative impact to these 13 species would be less than significant.

~~The direct and indirect impacts presented above for special status species would add to the general cumulative impacts to these species primarily through habitat loss and to a lesser extent through the potential loss of individuals of these species that occur on-site. When compared to other projects being considered for this analysis, cumulative impacts to special status species would not be considered significant because the other projects are likely not to impact special status species and mitigation measures for habitat loss from the Lilac Hills Ranch project will reduce their impacts to below a level of significance.~~

3.3.2 Cumulative Impacts to List D Plants

As indicated above, the project would have less than significant impacts to three List D plants; prostrate spineflower spiny rush, and Engelmann oak. As they include coast live oak woodlands and drainages, cumulative projects 3 and 9 have a potential to include spiny rush and Engelmann oak. Cumulative projects 3 and 8 also have potential to include prostrate spineflower since they contain chaparral habitat. The potential cumulative loss of prostrate spineflower, spiny rush, and Engelmann oak in the localized cumulative area would not jeopardize the long-term survival of these species given the wide range and abundance of these species northern San Diego County.

3.3.3 Cumulative Impacts to Nesting and Functional Foraging Habitat for Raptors

The orchards, row crops, and native habitats located on the project site and cumulative project site provide for raptor foraging and nesting habitat for raptors. The

implementation of the project and cumulative projects would result in the loss of raptor nesting and foraging habitat. However, a significant amount of nesting and foraging habitats would remain within the cumulative study area after the implementation of project and cumulative projects. Considering the amount of nesting and foraging raptor habitat remaining, raptors would move to the remaining areas and the cumulative loss of nesting and foraging habitat would not reduce the existing raptor population in the area. In addition, projects would be required to comply with the MBTA and Fish and Game Code that protects nesting raptors. Thus, the cumulative impacts to nesting and foraging habitat for raptors would be less than significant.

3.3.4 Cumulative Indirect Impacts to Proposed and Existing Open Space Areas

The project would result in less than significant impacts to on-site and adjacent open space areas. Given the cumulative project locations and the location of open space, only cumulative project 2 could result in indirect impacts to the same open space area that the project would indirectly impact. Given that the cumulative project 2 is located approximately 250 feet from the proposed open space riparian corridor on the project site and is already developed with agricultural uses, it is unlikely that development of that site in combination with the project would result in a new cumulatively significant impact. The remaining cumulative projects have potential to indirectly impact other open space areas. These cumulative indirect impacts could be significant if adequate mitigation, including buffers, is not provided. As the project includes features to avoid indirect impacts, the project contribution to the cumulative indirect impacts would be less than significant.

3.3.5 Cumulative Impacts to Sensitive Bird Nesting

The agricultural and native habitats located on the project site and cumulative project sites provide nesting habitat for species covered by the Migratory Bird Treaty Act and Fish and Game Code. The cumulative projects as well as the proposed project are all required to comply with the Migratory Bird Treaty Act and Fish and Game Code. As such, cumulative impacts to sensitive bird nesting would be less than significant.

3.4 Mitigation Measures and Design Considerations

Mitigation measures to be applied to reduce significant impacts to special status species to below a level of significance are presented in this section of the report.

3.4.1 Plant Species

No significant impacts to special status plant species were identified.

3.4.2 Animal Species

The direct and indirect impacts to native habitats on-site that support special status species are considered significant and require mitigation. Mitigation requirements presented in Section 4.4 for habitat loss would reduce impacts of habitat loss for special status species to a level below significance. The preservation of similar upland habitat types at an off-site location within a future draft PAMA is important. In addition, the location of the preserved habitat should be in an area that supports the Group 1 wildlife species being affected by the project. Biological resource surveys of the lands proposed as mitigation would be necessary to verify that the lands being preserved support the Group 1 animals being affected by the project (see Section 3.2.2.2 Impacts to County Group 1 Animals and Species of Special Concern for a list of species).

The on-site preservation of primarily riparian woodland and riparian scrub habitats along the major drainage courses would mitigate habitat impacts to special status animal species that prefer riparian habitat (e.g., Cooper's hawk, white-tailed kite, yellow warbler, and yellow-breasted chat). The proposed minimum 50-foot wetland buffers in conjunction with the adjacent 100-foot limited building zone are adequate to reduce potential edge effects to the habitat that supports these species.

3.5 Conclusions

Direct and indirect impacts to the native upland and riparian habitats that support special status plant and animal species on-site are considered significant and require mitigation. Mitigation for these habitats would reduce impacts to special status plants and animals to a level below significance.

4.0 Riparian Habitat or Sensitive Natural Community

A determination of the significance of direct and indirect impacts on riparian habitats or sensitive natural communities is presented in this section of the report. Guidelines for the determination of significance are applied to the proposed impacts to riparian habitat or sensitive natural communities anticipated by the project to determine significance under CEQA and County of San Diego guidelines.

4.1 Guidelines for Determination of Significance

The determination of the significance of impacts to special status species is made with regard to the following:

> The project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (County of San Diego 2010).

4.2 Analysis of Project Effects

A discussion of the direct and potential indirect impacts to riparian habitat or sensitive natural communities that would occur due to the project is presented in this section of the report.

4.2.1 Direct Impacts to Riparian Habitat or Sensitive Natural Communities

The project would have direct impacts to riparian habitat (see Table 4) due to road crossings and general site grading. Anticipated impacts would remove vegetation during the grading of the project and result in the placement of fill, structures, road crossings, culverts and other infrastructure (e.g., utility lines) in wetlands and riparian habitat. These impacts would be considered significant.

4.2.2 Impacts to Jurisdictional Wetlands/Riparian Habitats – USACE, CDFG, County of San Diego

The project would have direct impacts to wetlands, riparian habitats, and other waters (i.e., non-wetland waters, streambed) under the jurisdiction of the USACE, CDFG, and

County of San Diego (see Table 6) due to road crossings and general site grading. Anticipated impacts would remove vegetation during the grading of the project and result in the placement of fill, structures, road crossings, culverts, and other infrastructure (e.g., utility lines) in wetlands, riparian habitat, and non-wetland waters/streambeds. These impacts would be considered significant.

4.2.3 Impacts to Groundwater

The proposed project plans to continue to pump groundwater. The groundwater extraction rates for the project would not exceed the current rates of extraction for agricultural uses (Wiedlin & Associates, Inc. 2012). The nine active wells extract water from depths ranging from 110 feet to 1,210 feet, well below the surface groundwater depths used by the riparian plant species. In addition, the proposed application of recycled water, potable water, and groundwater over the site has the potential to increase the groundwater recharge rate over the existing condition. Based on the amount to be ~~proposed level of~~ extracted and potential recharge, no impacts to groundwater-dependent habitat are anticipated for this project.

4.2.4 Potential Indirect Impacts to Riparian Habitat or Sensitive Natural Communities

The proposed riparian habitat areas to remain in open space within the project area would be along drainage courses that are being avoided (see Figures 10a-c). These riparian habitat areas are narrow and mostly surrounded by development except along the western and southern boundary of the project. Sources of indirect impacts to these sensitive habitat areas would result from increased human access, potential increases in predation/competition on native wildlife from domestic animals, potential increases in invasive plant species or other domestic pests, alterations to natural drainage patterns, potential noise effects, and potential effects on wildlife species due to increases in night time lighting. Sensitive riparian bird species may be the most affected by these edge effects. Habitat quality, functions, and values would likely decrease also. The project would establish buffers that are a minimum of 50 feet around these open space areas to reduce these edge effects. In addition, the project would include permanent fencing or walls where lots are adjacent to open space, at trail heads and at staging areas; signage every 200 feet on trails along or in open space prohibiting access to sensitive areas; and 100-foot limited building zones around open space areas to reduce edge effects. The project would also include compliance with lighting, water quality/hydrology, noise, and other regulations that would reduce indirect impacts to open space. Specifically, County regulations require on-site nighttime lighting to be shielded and directed away from riparian and sensitive habitat. Through conformance with the Watershed Protection Ordinance (WPO), the project's Stormwater Pollution Prevention Plan (SWPPP) would provide Best Management Practices (BMPs) to be used as a filtration system to protect the on-site riparian areas from polluted run-off. The project would be required to comply

with the San Diego County Code Section 36.404, Sound Level Limits, and Section 36.409, Sound Level Limitations on Construction Equipment. Therefore, the potential indirect impacts to sensitive habitat areas within proposed project open space would not be considered significant.

4.2.5 Wetland Buffers

Current buffers of wetlands as contained within the designated limits of the proposed biological open space areas are a minimum of 50 feet wide for the preserved wetlands (Figures 13a,b). The wetland areas where the riparian habitat is of higher quality (i.e., along the southwestern boundary and southern portions of the site) generally have buffers that exceed 50 feet to better protect the function and value of the preserved wetland. Wetland buffers along the southwest boundary have portions with buffers that range in width between 100 feet and 500 feet, while wetland buffers at the southern part of the site have portions of habitat that have buffers between 90 feet and 100 feet wide, including the wetland creation area. ~~Some wetland buffer widths exceed 100 feet for limited distances.~~

The provided buffers, in conjunction with the adjacent limit building zone outside of the biological open space limits, will reduce edge effects on these conserved habitats. A 50-foot buffer is adequate for the protection of the majority of the on-site wetlands because the existing habitats are narrow and have functions and values that have been affected by agricultural activities. ~~The wetland areas where the riparian habitat is of higher quality (i.e., along the western boundary and southern portions of the site) generally have buffers that exceed 50 feet to better protect the function and value of the preserved wetland.~~

4.3 Cumulative Impact Analysis

Cumulative impacts from the proposed project were evaluated with regards to past, present, and future projects within the ~~local~~ cumulative study area. As described above in Section 3.3, the cumulative study area consists of the local wildlife ecoregion (see Figure 12). ~~Eight~~ Twelve projects were identified for the evaluation of cumulative impacts (see Table 7). ~~Review of aerial photography of these eight parcels show that the majority of the impacts from these projects will be to agricultural lands (e.g., orchards, row crops) and little to no impacts to native upland or riparian habitats (see Figure 12).~~

~~Direct and indirect impacts to riparian communities on-site would contribute to the cumulative loss of these vegetation types in San Diego County. When compared to projects being evaluated for cumulative impacts in the area, it appears that only the current project has the potential to impact riparian communities. Cumulative impacts to~~

~~riparian areas would not be considered significant because the project will mitigate impacts so that a no net loss of riparian habitat will occur.~~

4.3.1 Cumulative Impacts to Riparian Habitat or Sensitive Natural Communities

The project would have significant direct impacts to riparian habitat (see Table 4). Cumulative projects 3, 7, 8, and 9 have potential to impact riparian habitat or sensitive natural communities, including coast live oak woodland, freshwater marsh, southern willow scrub, Diegan coastal sage scrub, southern mixed chaparral, and non-native grassland. The project and cumulative projects would to mitigate for the loss of these habitats in accordance with the RPO, and County's Guidelines for Determining Significance – Biological Resources (County of San Diego 2010) at ratios designed to avoid significant cumulative impacts. Thus, significant cumulative impacts to riparian and sensitive natural communities would be avoided.

4.3.2 Cumulative Impacts to Jurisdictional Wetlands/Riparian Habitats – USACE, CDFG, County of San Diego

The project would have significant direct impacts to wetlands, riparian habitats, and other waters (i.e., non-wetland waters, streambed) under the jurisdiction of the USACE, CDFW, and County of San Diego (see Table 6). The cumulative projects 3 and 9 have potential to include jurisdictional habitat impacts considering the habitats (i.e., coast live oak woodland, freshwater marsh, southern willow scrub) and drainages present. Nonetheless, the cumulative impacts to riparian areas would not be considered significant because the projects will be required to mitigate impacts in accordance with regulations (e.g., Clean Water Act, Fish and Game Code, RPO) so that a no net loss of wetland/riparian habitat will occur.

4.3.3 Cumulative Impacts to Groundwater

As described in Section 4.2.3, the project would not impact groundwater levels or associated groundwater dependent habitat. Thus, the project would not add to a cumulative groundwater impact.

4.3.4 Cumulative Indirect Impacts to Riparian Habitat or Sensitive Natural Communities

The proposed project would result in less than significant indirect impacts to riparian habitat and sensitive natural communities. All the cumulative projects contain or are adjacent to sensitive natural communities or riparian habitat except cumulative projects 5

and 6. The potential indirect impacts from the cumulative projects would result from increased human access, predation/competition with domestic animals, invasive plant species, drainage alterations, runoff pollution, noise, and/or night time lighting. All projects would be required to comply with County regulations related to lighting, water quality/hydrology, noise, and wetland buffers (e.g., San Diego Light Pollution Code, County Zoning Ordinance, WPO, Noise Ordinance, RPO). None-the-less, the cumulative indirect impacts could be significant if adequate mitigation or design features are not provided. As the project includes features to avoid indirect impacts, the project contribution to the cumulative indirect impacts would be less than significant.

4.3.5 Cumulative - Wetland Buffers

As discussed above in Section 4.2.5, the project includes wetland buffers that are adequate to protect the functions and values of the corresponding wetland. RPO requires that the cumulative projects also provide adequate buffers. Thus, cumulative impacts related to wetland buffers would be less than significant.

4.4 Mitigation Measures and Design Considerations

Mitigation for impacts to riparian habitats would include a combination of the following measures: off-site purchase/preservation of habitat within future PAMA lands, conservation of habitats in on-site biological open space, preparation and implementation of on-site/off-site revegetation plans, and revegetation and enhancement of disturbed riparian habitats conserved in on-site biological open space areas. A conceptual wetland revegetation plan has been prepared that discusses the proposed on-site creation and enhancement of wetlands to meet the mitigation requirements (Attachment 16). In addition, a conceptual Resource Management Plan (RMP) for the on-site biological open space areas has been prepared (Attachment 17).

A summary of mitigation acreages for each of these options is presented in Section 8.0 of this report. Other mitigation measures would become part of project design and approvals, including restrictions on lighting, runoff, access, and noise to reduce potential indirect impacts to conserved biological open space due to edge effects.

4.5 Conclusions

Mitigation for significant impacts to riparian and natural communities would be accomplished through a combination of off-site purchase and preservation of habitat within future PAMA lands, on-site conservation, on-site/off-site revegetation, and on-site habitat enhancement. Project design features (e.g., buffers, restrictions on lighting,

access, noise, and runoff) would provide additional mitigation to reduce potential indirect impacts from edge effects on these conserved habitats. Wetland buffers are being provided that will reduce the potential for indirect edge effects on the biological open space areas. Limited building zones adjacent to the biological open space will also help reduce the potential for indirect edge effects. Project nighttime lighting adjacent to the biological open space area shall be shielded and directed away from the preserved habitat to reduce any indirect effects of light pollution on the wetland habitat. Signage and fencing will restrict access to the biological open space areas except along designated trails to help minimize any potential future impacts to the wetlands. Restriction on construction activities during the sensitive avian breeding season will reduce the potential for indirect noise impacts while the project is being graded. Storm drain outlets must meet the storm water pollution requirements which will limit any indirect impacts from runoff to the wetland areas.

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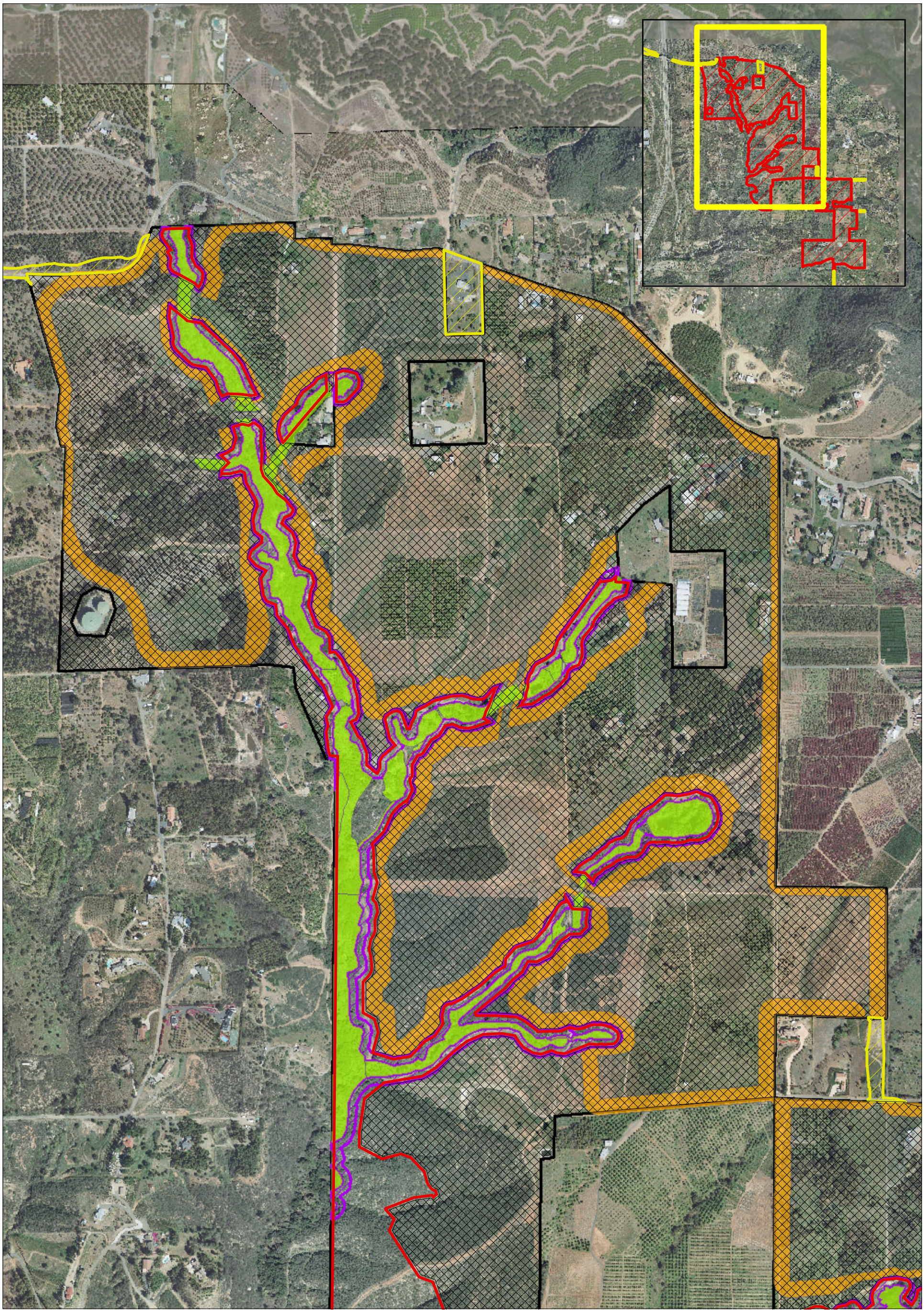

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FIGURE 13a

Lilac Hills Ranch Location of Wetland Buffer

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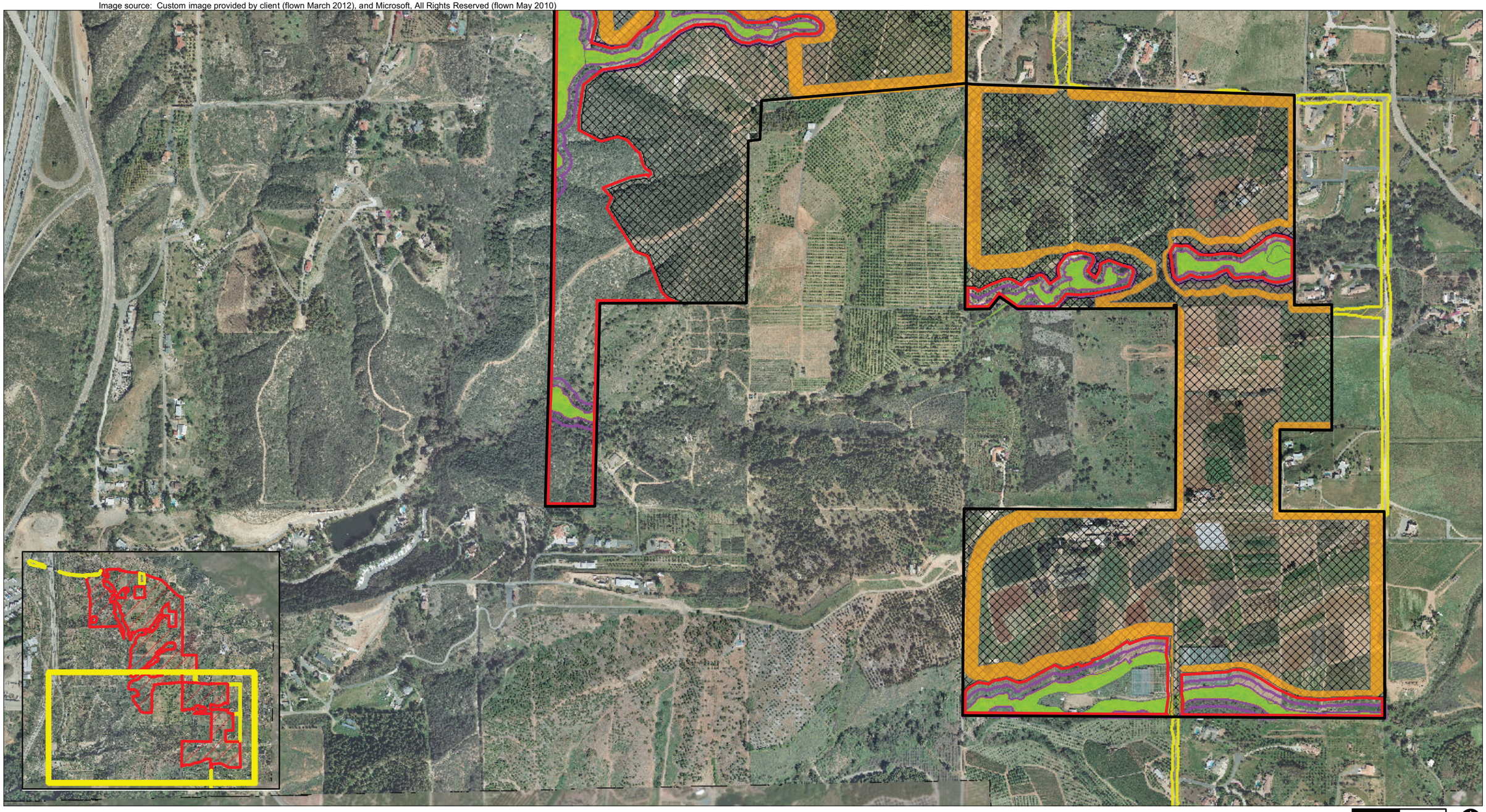

Project Boundary
Development Limits
Off-site Improvement Areas
Biological Open Space Boundary
100-ft. Limited Building Zone
RPO Wetland
50-ft. Buffer

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FIGURE 13b

Lilac Hills Ranch Location of Wetland Buffer

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5.0 Jurisdictional Waters and Waterways

The direct and indirect impacts to jurisdictional waters including wetlands are presented in this section. Federal jurisdictional waters and wetlands fall under the authority of the U.S. Army Corps of Engineers per Section 404 of the Clean Water Act. State jurisdictional waters and wetlands fall under the authority of the California Department of Fish and Game per Section 1600 of the Fish and Game Code. County of San Diego wetlands are regulated under the Resource Protection Ordinance.

5.1 Guidelines for Determination of Significance

The determination of the significance of impacts to jurisdictional waters and wetlands is made with regard to the following:

> The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (County of San Diego 2010).

5.2 Analysis of Project Effects

5.2.1 Direct Impacts to Jurisdictional Waters and Waterways

Direct impacts to federal and state jurisdictional waters and wetlands, and to RPO wetlands would occur from grading of the project (see Table 6; see Figure 11a-d). Impacts to smaller ephemeral jurisdictional waters would be from filling for development. Impacts to larger jurisdictional waters and wetlands associated with intermittent drainages would be primarily from fill associated with road crossings and culverts. Some jurisdictional waters that support riparian vegetation such as coast live oak riparian woodland, southern willow riparian woodland, or southern willow scrub were largely avoided or impacted just from road crossings to minimize impacts.

5.2.2 Impacts to Jurisdictional Wetlands/Riparian Habitats – USACE, CDFG, County of San Diego

The project would have direct impacts to wetlands, riparian habitats, and other waters (i.e., non-wetland waters, streambed) under the jurisdiction of the USACE, CDFG, and County of San Diego (see Table 6) due to road crossings and general site grading. Anticipated impacts would remove vegetation during the grading of the project and result in the placement of fill, structures, road crossings, culverts, and other infrastructure (e.g., utility lines) in wetlands, riparian habitat, and non-wetland waters/streambeds. These impacts would be considered significant.

5.2.3 Impacts to Groundwater

The proposed project plans to continue to pump groundwater. The groundwater extraction rates for the project would not exceed the current rates of extraction for agricultural uses (Wiedlin & Associates, Inc. 2012). The nine active wells extract water from depths ranging from 110 feet to 1,210 feet, well below the surface groundwater depths used by the riparian plant species. In addition, the proposed application of recycled water, potable water, and groundwater over the site will have the potential to increase the groundwater recharge rate over the existing condition. No impacts to groundwater-dependent habitat (i.e., wetlands, riparian habitat) are anticipated for this project based on the ~~proposed level of~~ extraction amount and potential recharge.

5.2.4 Potential Indirect Impacts to Jurisdictional Waters and Waterways

The proposed jurisdictional waters and wetland areas to remain in open space within the project area would be along drainage courses that are being avoided (see Figures 13a,b). These jurisdictional waterways are narrow and mostly surrounded by development except along the western and southern boundary of the project. Sources of indirect impacts to these jurisdictional areas would result from increased human access, potential increases in predation/competition on native wildlife from domestic animals, potential increases in invasive plant species or other domestic pests, alterations to natural drainage patterns, potential noise effects, and potential effects on wildlife species due to increases in night time lighting. Wildlife species supported by these waterways may be the most affected by these edge effects. Riparian and wetland habitat quality, functions, and values may also decrease due to edge effects. The project would establish wetland buffers that are a minimum of 50 feet and also would include an adjacent 100-foot limited building zone to avoid edge effects to the jurisdictional waters within open space. In addition, the project includes fencing where lots are adjacent to open space and at trail heads prohibiting access to sensitive areas. The project would also comply with County regulations that require on-site nighttime lighting to be shielded and directed away from sensitive habitat such as jurisdictional waters. Through

conformance with the WPO, the project's SWPPP would provide BMPs to be used as a filtration system to protect the on-site jurisdictional areas from polluted run-off. ~~to these open space areas that will help mitigate these potential edge effects. The 50-foot wetland buffer and adjacent 100-foot limited building zone outside of the open space boundary will also help mitigate any potential indirect effects on the biological open space.~~ Therefore, the potential indirect impacts to jurisdictional waters and wetlands within proposed project open space would not be considered significant.

5.2.3 Wetland Buffers

Current buffers of wetlands as contained within the designated limits of the proposed biological open space areas are a minimum of 50 feet wide for the preserved wetlands (see Figure 13a,b). Buffers around the proposed wetland creation area would be a minimum of 90 feet. Some wetland buffer widths exceed 100 feet for limited distances. The provided buffers, in conjunction with the adjacent 100-foot limited building zone outside of the biological open space limits, will reduce potential edge effects on these conserved habitats. A 50-foot buffer is adequate for the protection of the majority of the on-site wetlands because the existing habitats are narrow, ~~and~~ have functions and values that have been affected by agricultural activities, and the project includes an additional 100-foot limited building zone that functions as additional buffer. The wetland areas where the riparian habitat is of higher quality (i.e., along the western boundary and southern portions of the site and the proposed wetland creation area) generally have buffers that exceed 50 feet to better protect the function and value of the preserved wetland.

5.3 Cumulative Impact Analysis

Cumulative impacts from the proposed project were evaluated with regards to past, present, and future projects within the cumulative study area. As described above in Section 3.3, the cumulative study area consists of the local wildlife ecoregion (see Figure 12). Twelve projects were identified for the evaluation of cumulative impacts within that area (see Table 7).

5.3.1 Cumulative Impacts to Jurisdictional Waters and Waterways

The project would have significant direct impacts to jurisdictional waters (see Table 6). Cumulative projects 3 and 9 have potential to impact jurisdictional waters such as coast live oak woodland, freshwater marsh, and southern willow scrub. The project and cumulative projects would to mitigate for the loss of these habitats in accordance with the RPO and Resource Agency wetland permits at ratios designed to avoid significant

cumulative impacts. Thus, significant cumulative impacts to jurisdictional waters would be avoided.

5.3.2 Cumulative Impacts to Jurisdictional Wetlands/Riparian Habitats – USACE, CDFW, County of San Diego

The project would have significant direct impacts to wetlands, riparian habitats, and other waters (i.e., non-wetland waters, streambed) under the jurisdiction of the USACE, CDFW, and County of San Diego (see Table 6). The cumulative projects 3 and 9 have potential to include jurisdictional habitat impacts considering the habitats (i.e., coast live oak woodland, freshwater marsh, southern willow scrub) and drainages present. None-the-less, the cumulative impacts to riparian areas would not be considered significant because the projects will be required to mitigate impacts in accordance with RPO and Resource Agency wetland permits so that a no net loss of wetlands/riparian habitat will occur. Thus, cumulative impacts to jurisdictional wetlands and riparian habitats would be less than significant.

5.3.3 Cumulative Impacts to Groundwater

As described in Section 5.2.3, the project would not impact groundwater levels or associated groundwater dependent habitat. Thus, the project would not add to a cumulative groundwater impact to jurisdictional waters.

5.3.4 Cumulative Indirect Impacts to Jurisdictional Waters and Waterways

The proposed project would result in less than significant indirect impacts to jurisdictional habitat. Cumulative projects 2, 3, 4, and 9 have potential to result in indirect impacts to jurisdictional habitat given their location near potential jurisdictional areas. RPO requires the provision of adequate buffers. As the project includes features to avoid indirect impacts and cumulative projects would also be required to include such features, the project contribution to the cumulative indirect impacts would be less than significant.

5.3.5 Cumulative - Wetland Buffers

As discussed above in Sections 5.2.5 and 5.3.4, the project includes wetland buffers that are adequate to protect the functions and values of the corresponding wetland. RPO requires that the cumulative projects also provide adequate buffers. Thus, cumulative impacts related to wetland buffers would be less than significant.

~~Cumulative impacts from the proposed project were evaluated with regards to past, present, and future projects within the local area. Eight projects were identified for the evaluation of cumulative impacts (see Table 7). Review of aerial photography of these eight parcels show that the majority of the impacts from these projects will be to agricultural lands (e.g., orchards, row crops) and little to no impacts to native upland or riparian habitats (see Figure 12).~~

~~The direct and indirect impacts to federal, state, and County jurisdictional waters and wetlands from the project would add to the general cumulative loss of jurisdictional waters and wetlands in the County of San Diego. When compared to projects being evaluated for cumulative impacts in the area, it appears that only the current project has the potential to impact federal, state, and County jurisdictional waters. Cumulative impacts to federal, state, and County jurisdictional waters would not be considered significant because the project will mitigate impacts so that a no net loss of jurisdictional waters, including wetlands, will occur.~~

5.4 Mitigation Measures and Design Considerations

Mitigation for impacts to federal, state, and County RPO jurisdictional waters and wetlands would be accomplished through the implementation of a combination of the following: preparation and implementation of on-site jurisdictional waters and wetland establishment plans, the restoration and enhancement of disturbed jurisdictional waters and wetlands within conserved open space, and project design features used to reduce the indirect impacts of edge effects on the conserved jurisdictional waters and wetlands (e.g., wetland buffers, restrictions on lighting, access, runoff, and noise). Typical wetland habitats require mitigation ratios of up to 3:1 and RPO requires a minimum 3:1 mitigation ratio for RPO wetland impacts. Mitigation for impacts to wetlands and RPO wetlands must at a minimum establish (create) wetlands at a 1:1 ratio to achieve a no net loss of wetland area, while the remaining 2:1 may be achieved through restoration and enhancement of disturbed wetlands. Mitigation acreage requirements for wetlands are included for wetland habitat types under Section 8.0 Summary of Project Impacts and Mitigation discussion (e.g., riparian woodlands, riparian scrubs, marsh, disturbed wetlands). On-site wetland mitigation areas are covered in the conceptual RMP prepared for the on-site biological open space areas (see Attachment 17). A conceptual wetland revegetation plan has been prepared for the proposed on-site mitigation areas (see Attachment 16).

5.5 Conclusions

Mitigation for significant impacts to jurisdictional waters and wetlands would be accomplished through a combination of on-site and off-site establishment and restoration/enhancement of conserved jurisdictional waters and wetlands. Project design features (e.g., buffers, restrictions on lighting, access, noise, and runoff) will provide mitigation to reduce potential indirect impacts from edge effects on these conserved on-site wetland habitats.

Wetland buffers are being provided that will reduce the potential for indirect edge effects on the biological open space areas. Limited building zones adjacent to the biological open space will also help reduce the potential for indirect edge effects. Project nighttime lighting adjacent to the biological open space area shall be shielded and directed away from the preserved habitat to reduce any indirect effects of light pollution on the wetland habitat. Signage and fencing will restrict access to the biological open space areas except along designated trails to help minimize any potential future impacts to the wetlands. Restriction on construction activities during the sensitive avian breeding season will reduce the potential for indirect noise impacts while the project is being graded. Storm drain outlets must meet the storm water pollution requirements which will limit any indirect impacts from runoff to the wetland areas.

6.0 Wildlife Movement and Nursery Sites

The project site does not support nursery sites for wildlife. Direct and indirect impacts to the local wildlife movement corridors on-site are discussed in this section of the report.

6.1 Guidelines for Determination of Significance

The determination of the significance of impacts to wildlife movement and nursery sites is made with regard to the following:

> The project would interfere substantially with the movement of a native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (County of San Diego 2010).

6.2 Analysis of Project Effects

Direct and indirect impacts from the project would reduce the relatively large patches of native upland vegetation in the project area and increase fragmentation of the riparian woodlands that form blocks native vegetation between regional habitat linkages to the north, south, and west. These impacts would reduce suitable habitat on-site that supports local populations of plant and wildlife species and they would reduce any potential natural upland habitat "stepping stone" connections for wildlife that can migrate between the larger regional connections. Minor impacts to portions of the draft PAMA area along the I-15 corridor from proposed off-site road improvements would not disrupt these wildlife movement areas. However, the project, through mitigation, would add lands to the future PAMAs when the draft North County MSCP is adopted. The local wildlife corridors identified on-site are not recognized as important regional linkages in the draft North County MSCP. However, the preservation of the local wildlife corridors on-site along the major drainage courses would continue to provide secondary corridor connections between the identified regional linkages to the north (Keys Canyon), south (Moosa Creek), and west (I-15 Escondido–Temecula). These direct and indirect impacts to local wildlife movement would not be considered significant.

6.2.1 Impacts to Wildlife Access to Foraging Habitat, Breeding Habitat, and Water Sources Necessary for Reproduction

No barriers will be created that would isolate portions of the existing riparian habitat within the local wildlife movement corridors from breeding or foraging habitat, or prevent access to water sources necessary for reproduction. The project has been designed to avoid direct impacts to the majority of the riparian habitat along the local wildlife movement corridors on the drainages within the project site, and provides a minimum 50-foot buffer to reduce the potential for edge effects on wildlife use of these movement corridors. No significant impacts to wildlife access to foraging or breeding habitat or water sources necessary for reproduction will occur.

6.2.2 Impacts to Connectivity of Blocks of Habitat and Local/Regional Wildlife Corridors and Linkages

The project would not impact the connectivity of blocks of habitat within regional wildlife corridors or linkages. Impacts to the local wildlife corridors and linkages along the major drainage courses that support riparian habitat have been minimized to road crossings. The establishment of a minimum 50-foot buffer, in addition to limited building zones adjacent to the buffer, will reduce the potential for indirect edge effects. The movement of wildlife, including large animal movement through the project, can continue along the drainage courses as vegetation cover will be sufficient to provide shelter and cover during movement. Culverts at the roads crossing the local movement corridors will range in size from 18 inches to 54 inches, depending on the particular drainage course. The culverts will be sufficient to allow small ~~walking~~ terrestrial animals to avoid roads, while the larger ~~walking~~ terrestrial animals could not use some of the ~~will need to pass around the~~ smaller culverts. Avian movement through the site would be minimally affected, as birds would be able to continue to use the riparian woodlands by flying along the habitat corridor.

6.2.3 Impacts from Artificial Wildlife Corridors

The project will not create an artificial wildlife corridor. Existing local wildlife corridors along the major drainage courses will be preserved and only impacted by road crossings.

6.2.4 Impacts on Wildlife Corridors/Linkages from Noise and Nighttime Lighting

The project has been designed to reduce noise and nighttime lighting to levels that will not significantly impact local wildlife behavior. Lighting adjacent to on-site biological open

space areas will be shielded and directed away from the surrounding habitat. Noise will not be sustained at levels that would disrupt wildlife movement during construction through breeding season noise restrictions or general post-project conditions through establishment of buffers and limit building zones.

Impacts from noise and lighting due to potential increases in traffic on the improved West Lilac Road between the project and I-15 are anticipated to be less than significant. Ambient noise levels at the native habitat within this wildlife corridor/linkage are already influenced by the current noise generated by the I-15 traffic and additional significant increases in noise levels are not expected to occur from the proposed West Lilac Road traffic. The native habitat occurs mostly on steep slopes at this location within the wildlife corridor/linkage and therefore additional nighttime light from vehicle headlights is not expected to pollute the habitat significantly above the existing condition as the light from the headlights would shine above the habitat.

6.2.5 Impacts to Wildlife Corridor/Linkage Widths

The project would not impact regional wildlife corridor or linkage widths. Minor impacts within regional wildlife corridor/linkage along the I-15 freeway due to the widening of existing roads would not affect the widths of these existing areas. The widths of local wildlife corridors along the major drainage courses are being preserved in biological open space with little impact to their existing widths. The establishment of a minimum of a 50-foot buffer around the biological open space helps preserve the existing widths of the local wildlife corridor/linkage.

6.2.6 Impacts to Visual Continuity of Wildlife Corridors/ Linkages

The project will not impact the visual continuity of any regional wildlife corridor or linkage. Local wildlife corridors/linkages being preserved on-site will be set back from the adjacent development by a wetland buffer and limited building zones that will reduce the potential for any significant indirect visual impacts and maintain the visual continuity of these local corridors.

6.3 Cumulative Impact Analysis

Cumulative impacts from the proposed project were evaluated with regards to past, present, and future projects within the ~~local~~ cumulative study area. As described above in Section 3.3, the cumulative study area consists of the local wildlife ecoregion (see Figure 12). Twelve projects were identified for the evaluation of cumulative impacts (see Table 7). Given the project's limited impact to wildlife corridors as discussed in

Section 6.2 above, the cumulative analysis below only addresses overall wildlife movement impacts.

~~Eight projects were identified for the evaluation of cumulative impacts (see Table 7). All eight of these projects are within the draft North County MSCP area but are outside of any draft PAMA areas.~~

Cumulative projects 1 and 3 are partially located within a future PAMA area that serves as a wildlife corridor along I-15. While those projects may contribute impacts to the regional or local wildlife corridors or linkages, the remaining cumulative projects would have negligible wildlife movement impacts because of their relatively small size and their location away from future PAMAs. The project would not directly or indirectly impact the future PAMA or other areas that serve as a regional wildlife corridor. As such, the project would not contribute to a cumulative regional wildlife corridor impact.

Direct and indirect impacts to wildlife movement corridors on the project site would ~~contribute to the general cumulative impacts to~~be limited to local wildlife movement. Given the location of the cumulative projects, only impacts of cumulative projects 1 and 2 could combine with the project to impact local wildlife movement. These general cumulative impacts would not be substantial enough to adversely affect any of the core wildlife movement corridors or linkages identified in this portion of northern San Diego County. ~~At this time, it appears that none of the projects within the cumulative impact area of analysis would significantly contribute to impacts to any regional or local wildlife corridors or linkages as these projects would be relatively small.~~ Preservation of the local wildlife corridors along the major drainage courses in the project area would continue to provide for secondary linkages to more important wildlife corridors off-site. Wetland buffers of a minimum of 50 feet will be established to reduce edge effects and maintain wildlife movement. Therefore, cumulative impacts to wildlife movement corridors from the project would not be considered significant.

6.4 Mitigation Measures and Design Considerations

The off-site preservation of native habitats in future PAMA lands provides an opportunity to enhance and contribute to regional wildlife movement corridors. On-site preservation of local wildlife movement corridors along the major drainage courses would continue to provide secondary linkages to future off-site PAMAs. Wetland buffers of a minimum of 50 feet will be established to reduce edge effects and maintain wildlife movement. Culverts have been sized according to the drainage width and will provide avenues for small walking animals to continue to use the open space areas for movement. Signage and fences will be provided to restrict access to the biological open space areas from

human encroachment and help direct larger walking animals to the movement corridors in the open space areas.

6.5 Conclusions

No significant impacts to regional wildlife movement corridors would occur from the project. Preservation of off-site native habitat in future PAMA lands may provide an opportunity to enhance some of the regional wildlife movement corridors through the addition of conserved lands within or adjacent to these corridors and linkages. The on-site preservation of local wildlife movement corridors along the major drainage courses within the biological open space on the project site would continue to provide secondary linkages to future PAMA lands off-site by limiting impacts to existing corridor widths, and reducing the potential for indirect impacts to the local wildlife movement corridors by providing a wetland buffer and limiting the number of road crossing on most movement corridors to just one.

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7.0 Local Policies, Ordinances, Adopted Plans

The relationship between the proposed project impacts to local policies, ordinances, and adopted plans is discussed in this section of the report. This discussion relates the project to the following: draft North County MSCP, NCCP, RPO, BMO, and Migratory Bird Treaty Act (MBTA).

7.1 Guidelines for Determination of Significance

The determination of the significance of compliance with local policies, ordinances, and adopted plans is made with regard to the following:

> The project would conflict with one or more local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (County of San Diego 2010).

7.2 Analysis of Project Effects

7.2.1 Southern California Coastal Sage Scrub NCCP Process Guidelines

The project area is located within the draft North County MSCP area (County of San Diego 2009; see Figure 5). It is adjacent to draft PAMA that are located to north (Keys Canyon) and west (I-15 corridor). Impacts to coastal sage scrub would be considered significant and subject to approval of a Habitat Loss Permit and compliance with impact minimization/mitigation guidelines contained in the NCCP.

Habitat Loss Permit Findings

1. The habitat loss does not exceed the 5 percent guideline.

   Impacts to coastal sage scrub on-site (19.4 acres) and off-site (1.3 acres) will not exceed the 5 percent guideline for the County of San Diego.

2. The habitat loss will not preclude connectivity between areas of high habitat values.

   The coastal sage scrub habitat on the site is relatively small in size and is not part of the most dense coastal sage scrub habitat in the region. The on-site habitat lies well to the south of larger, dense habitat within Keys Canyon. Coastal sage scrub habitat to the south of this dense habitat area is present in scattered small patches that do not form an important linkage corridor for coastal sage scrub. The on-site habitat does not support any sensitive target or endemic species. Therefore, the coastal sage scrub habitat present within the Lilac Hills Ranch project area is ranked as “low potential for long-term conservation” based on the NCCP flow chart for habitat evaluation.

   Coastal sage scrub habitat within or adjacent to proposed off-site improvements is next to existing roads and the I-15 freeway. Impacts to these coastal sage scrub areas would be minimal and along the edges of the road right-of-ways. The off-site coastal sage scrub habitat within the proposed improvement areas is not anticipated to support any sensitive target or endemic species.

   Impacts to the coastal sage scrub habitat on-site and off-site would not foreclose the ability to provide connectivity between high habitat value areas to the north in Keys Canyon or to the west along the I-15 habitat corridor. There are only a few scattered small patches of coastal sage scrub habitat in-between the on-site habitat and the high value habitat areas to the north and west.

3. The habitat loss will not preclude or prevent the preparation of the subregional NCCP.

   The coastal sage scrub habitat on-site and off-site does not support any sensitive species. The loss of coastal sage scrub habitat due to project impacts will not isolate the remaining habitats from other natural resources or habitats required for the preparation of a subregional NCCP plan as the project site is not in a high biological habitat value core area.

4. The habitat loss has been minimized and mitigated to the maximum extent possible in accordance with Section 4.3 of the NCCP Guidelines.

   The coastal sage scrub habitat on the project site occurs as relatively small isolated patches that are not occupied by any sensitive species. The on-site coastal sage scrub habitat is not part of the draft PAMA areas, while portions of the coastal sage scrub habitat adjacent to off-site improvement areas near I-15 are within draft PAMA areas. Impacts to the habitat have been avoided and minimized where coastal sage scrub is adjacent to wetland habitat. Only minor impacts to coastal sage scrub from off-site improvements is anticipated along the

edges of the West Lilac Road and the intersections near Gopher Canyon Road. Mitigation for all project impacts to coastal sage scrub will be accomplished by the off-site preservation of coastal sage scrub habitat at a 2:1 ratio within a proposed future PAMA area.

5. The habitat loss will not appreciably reduce the likelihood of survival and recovery of the listed species in the wild.

   The on-site coastal sage scrub habitat to be impacted does not support any sensitive species, is not part of any draft PAMA, and is not part of any biological resource core area. The coastal sage scrub habitat within off-site improvement areas is within the draft PAMA area along the I-15 corridor, but it is unlikely that listed species occur in the narrow habitat areas within the proposed improvement areas. Therefore, the loss of habitat will not appreciably reduce the likelihood of survival and recovery of any listed species in the wild.

6. The habitat loss is incidental to otherwise lawful activities.

   The proposed loss of coastal sage scrub will be incidental and part of a lawful activity.

7.2.2 Impacts to Subregional NCCPs

The coastal sage scrub habitat on-site and off-site does not support any sensitive species. The loss of coastal sage scrub habitat due to project impacts will not isolate the remaining habitats from other natural resources or habitats required for the preparation of a subregional NCCP plan as the project site is not in a high biological habitat value core area, and off-site impacts to the draft PAMA area would be minimal, being confined to existing road right-of ways. These losses of habitat would not preclude or prevent the preparation of the subregional NCCP for this part of San Diego County.

7.2.3 RPO Wetlands and Sensitive Habitat Lands

The proposed project would have impacts to RPO wetlands. Impacts to on-site RPO wetlands were largely avoided and those that were unavoidable are primarily due to road crossings that are needed to provide the secondary access required for fire and emergency access. The impacts at these crossings have been minimized by designing roads to their minimum allowable widths and locating crossings where there are existing roads or the riparian habitat is narrow and disturbed (see RPO findings in Attachment 15). Off-site impacts to RPO wetlands are due to the required widening of existing roads. The roads will be widened to the minimum necessary to meet the required traffic standards. These impacts are discussed in detail above and are all

considered significant. Implementation of mitigation measures are anticipated to bring the project into compliance with RPO.

7.2.4 Mitigation and NCCP Guidelines

The proposed mitigation for impacts to coastal sage scrub habitat will be in accordance with Section 4.l3 of the NCCP process guidelines. Mitigation for all project impacts to coastal sage scrub will be accomplished by the off-site preservation of coastal sage scrub habitat at a 2:1 ratio within a proposed future PAMA area.

7.2.5 Conformance to Applicable Habitat Conservation Plans, Habitat Management Plans, Special Area Management Plans, Watershed Plans, or Similar Regional Planning Efforts

The project area is not part of any specific conservation or management plans with the exception of the NCCP. Compliance with the NCCP is anticipated after appropriate mitigation measures are implemented.

7.2.6 Conformance with the Draft North County MSCP: Biological Resource Core Areas

The project area is not located in or part of any identified biological resource core area within the draft North County MSCP. Portions of some of the off-site improvement areas occur within draft PAMA areas identified along the I-15 corridor; however, impacts to coastal sage scrub habitat will be minimal and confined to areas adjacent to existing roads and intersections. These minor impacts to a biological resource core area would not be considered significant as the impacts are relatively small acreages adjacent to existing roads; however, the loss of coastal sage scrub habitat in general would be considered significant.

7.2.7 Habitat Connectivity, Movement Corridors, and Habitat Linkages

The proposed project would not interrupt any substantial habitat connectivity or linkage to biological resource core areas due to the extent of agricultural lands on-site and in the surrounding areas. Local movement corridors would be impeded by development of the project, but these are considered not significant as discussed in Section 6.2. Establishment of adequate habitat buffers would help reduce edge effects on conserved lands in on-site biological open space areas.

7.2.8 Narrow Endemic Species and Listed Species

The proposed project would not have impacts to any narrow endemic species or to any core populations of any narrow endemic species. The project would not result in any impacts to any federal or state listed species.

7.2.9 Migratory Birds and Bald/Golden Eagles

The project has the potential to impact migratory birds, their nests, and or eggs if impacts to habitat occur during the breeding season as defined under the MBTA. Any impacts nesting birds would be considered significant but may be avoided or minimized through avoidance of the breeding season, pre-construction surveys that identify nests to be avoided, and working around identified breeding areas until the young have fledged.

No bald or golden eagles were observed using the project area. The project site does not contain suitable nesting habitat for bald or golden eagle. These eagles typically nest on cliffs or in deciduous and coniferous trees at higher elevations (USFWS 2010). The nearest known sighting of a golden eagle is approximately 4.5 miles to the northeast near Pala Mountain and around the San Luis Rey river valley (State of California 2007d). It is not known if nesting activity was observed at this location. However, the proposed project is over 4,000 feet from this known occurrence and, therefore, would not likely impact golden eagle habitat. Therefore, no impacts to these species of eagle are anticipated to occur.

7.3 Cumulative Impact Analysis

Cumulative impacts from the proposed project were evaluated with regards to past, present, and future projects within the cumulative study area~~the local area~~. As described above in Section 3.3, the cumulative study area consists of the local wildlife ecoregion (see Figure 12). Twelve ~~Eight~~ projects were identified for the evaluation of cumulative impacts (see Table 7). Review of aerial photography of these ~~eight parcels~~sites show that the majority of the impacts from these projects will be to agricultural lands (e.g., orchards, row crops) and little to no impacts to native upland or riparian habitats (see Figure 12). ~~These projects are within the draft North County MSCP area, but are mostly outside of the draft PAMA areas.~~

The proposed Lilac Hills Ranch project will comply with local policies, ordinances, and adopted plans to ensure that impacts to biological resources are avoided, minimized, and mitigated according to guidelines established by these regulations. It is assumed that the present and future projects within the cumulative impact analysis area will comply with all local ordinances, policies, and adopted plans as well. As such, a

cumulative analysis of each policy and plan discussed in Section 7.2 is not necessary. ~~Therefore, c~~Cumulative impacts from the proposed Lilac Hills Ranch project would not be considered significant after implementation of the approved mitigation measures.

7.4 Mitigation Measures and Design Considerations

Mitigation measures to be implemented to compensate for significant direct and indirect impacts to riparian habitat, natural communities, and jurisdictional waters and wetlands will involve one or a combination of the following measures: off-site purchase of habitat, on-site habitat conservation, on-site/off-site re-vegetation and enhancement, and project design features to reduce potential edge effects (e.g., habitat buffers). These mitigation measures are consistent with mitigation required under the local policies, ordinances, and adopted plans.

7.5 Conclusions

Mitigation measures to be implemented to compensate for significant direct and indirect impacts to riparian habitat, and jurisdictional waters and wetlands would be consistent with mitigation required under the local policies, ordinances, and adopted plans.

8.0 Summary of Project Impacts and Mitigation

A summary of the proposed direct impacts to habitat/vegetation communities and required mitigation acreages is provided in Table 8. A summary of the proposed mitigation measures for the project is provided in Table 9. Mitigation for impacts to upland natural communities (e.g., coast live oak woodland, coastal sage scrub, southern mixed chaparral) would be achieved through the purchase and conservation of off-site habitat within future PAMA lands. A conceptual Resource Management Plan for the proposed off-site upland mitigation areas has been prepared that contains the criteria for site selection and management guidelines (Attachment 18).

Mitigation for impacts to riparian/wetland habitats would be achieved through a combination of on-site/off-site wetland establishment (creation) and the restoration/enhancement of on-site wetland areas through the removal of non-native invasive plant species within biological open space (Figures 14a,b). Potential on-site wetland mitigation may provide up to 6 acres of creation and 12 acres of restoration/enhancement mitigation. Biological open space areas on-site will be dedicated with each phase of development (Table 10 and Figure 15). Open space dedication is phased to include adjacent open space areas in the phase of development that borders the phase under construction to reduce the chance for inadvertent impacts to occur to the resources in these open space areas. Open space fencing and signage would be implemented upon dedication of the open space area.

Mitigation for upland and wetland habitats would also compensate for the loss of habitats that support special status wildlife species by providing conserved habitat within future PAMA lands that may also support these wildlife species. The on-site biological open space areas and associated buffers would help reduce potential edge effects and provide for the maintenance of local secondary wildlife movement corridors. Enhancement of the habitats in the biological open space areas achieved by the removal of non-native invasive plant species and the establishment of native plant species will also benefit wildlife on-site and local wildlife movement. Implementation of resource management plans for conserved lands on-site and off-site associated with the project mitigation would provide for the preservation and long-term maintenance of these lands.

Mitigation for potential impacts to nesting raptors and other general birds would be achieved through either avoidance of impacts to vegetation during the nesting season, and/or pre-construction surveys and avoidance of identified nests during construction.

Indirect impacts associated with edge effects from development would be mitigated through project design features that reduce the effects of noise, lighting, invasive species, drainage, and access to biological open space areas. Noise impacts would be

TABLE 8
HABITAT/VEGETATION COMMUNITIES, IMPACTS, AND MITIGATION

Habitat/Vegetation Community	Existing (acres)	Impacts (acres)	Off-site[3] Impacts (acres)	Mitigation Ratio	Mitigation Required (acres)	Preserved On-site/ Impact Neutral (acres)	Off-site Mitigation (acres)
Coast live oak woodland	3.6	0.3	0	3:1	1.2	3.3	1.2
Coastal sage scrub	19.6	17.0	0.1	2:1	34.2	2.6	34.2
Disturbed coastal sage scrub	2.9	2.6	0	2:1	5.2	0.3	5.2
Disturbed coastal/valley freshwater marsh	0.6	0.1	0	3:1	0.3	0.5	0.3[1]
Eucalyptus woodland	1.7	1.0	0	None	None	0.7	None
Southern coast live oak riparian woodland	22.5	1.1	0	3:1	3.3	21.4	3.3[1]
Disturbed southern coast live oak woodland	1.9	0.5	0	3:1	1.5	1.4	1.5[1]
Southern mixed chaparral	75.4	49.4	0	0.5:1	24.5	26.0	24.5
Disturbed southern mixed chaparral	6.0	4.9	0	0.5:1	2.4	1.1	2.4
Southern willow riparian woodland	4.7	0.5	0	3:1	1.5	4.2	1.5[1]
Southern willow scrub	6.1	0.3	0	3:1	0.9	5.8	0.9[1]
Disturbed southern willow scrub	0.3	0.3	0	3:1	0.9	0	0.9[1]
Mule fat scrub	0.1	0.1	0	3:1	0.3	0	0.3[1]
Open water – freshwater	0.5	0.5	0	3:1	1.5	0	1.5[1]
Disturbed wetland	0.4	0.1	0	3:1	0.3	0.3	0.3[1]
Extensive agriculture – row crops	90.5	84.5~~85~~	0	None	None	6.0~~5.5~~	None
Intensive agriculture – nursery	9.2	6.2~~6.7~~	0	None	None	3.0~~2.5~~	None
Vineyard	0.7	0.6	0	None	None	0.1	None
Orchard	291.9	276.4~~276.8~~	1.2	None	None	15.5~~1~~	None
Disturbed habitat	44.0	34.8	2.4	None	None	9.2	None
Developed	25.7	22.8	21.1	None	None	2.9	None
TOTAL	608.3	505.0~~4~~	24.8		78.0	10~~4~~.1~~2.7~~	78.0[2]

[1]A portion of this mitigation acreage may be achieved on-site. Total on-site mitigation acreage not yet determined.
[2]Total off-site mitigation requirement may be lower when on-site mitigation opportunities are fully quantified.
[3]Additional off-site impacts from Rodriquez Road improvements, if required, would result in mitigation requirements of 0.06 acre of coastal live oak woodland, 0.09 acre of southern coastal live oak riparian woodland, 0.04 acre of non-native grassland, and 0.08 acre of coastal sage scrub.

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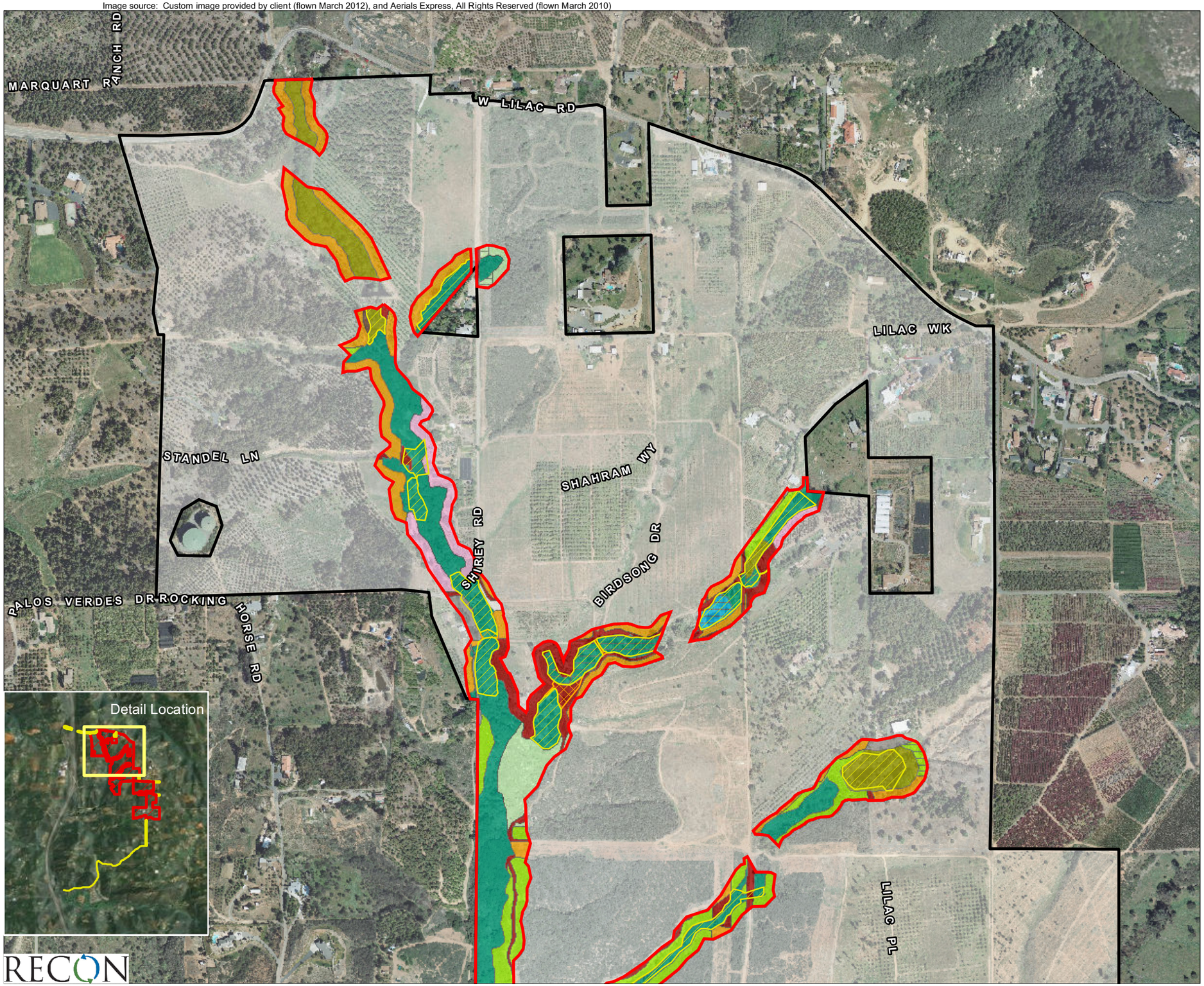

- Project Boundary
- Biological Open Space Boundary
- Wetland Creation
- Wetland Enhancement

Vegetation Communities and Landcover

- Coastal Sage Scrub (32520)
- Disturbed Coastal Sage Scrub (32520)
- Disturbed Coastal/Valley Freshwater Marsh (52410)
- Eucalyptus Woodland (79100)
- Southern Coast Live Oak Riparian Woodland (61310)
- Disturbed Southern Coast Live Oak Riparian Woodland (61310)
- Southern Mixed Chaparral (37120)
- Disturbed Southern Mixed Chaparral
- Southern Willow Riparian Woodland
- Intensive Agriculture - Nursery
- Orchard (18100)
- Vinyard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

0 Feet 500

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FIGURE 14a

Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation

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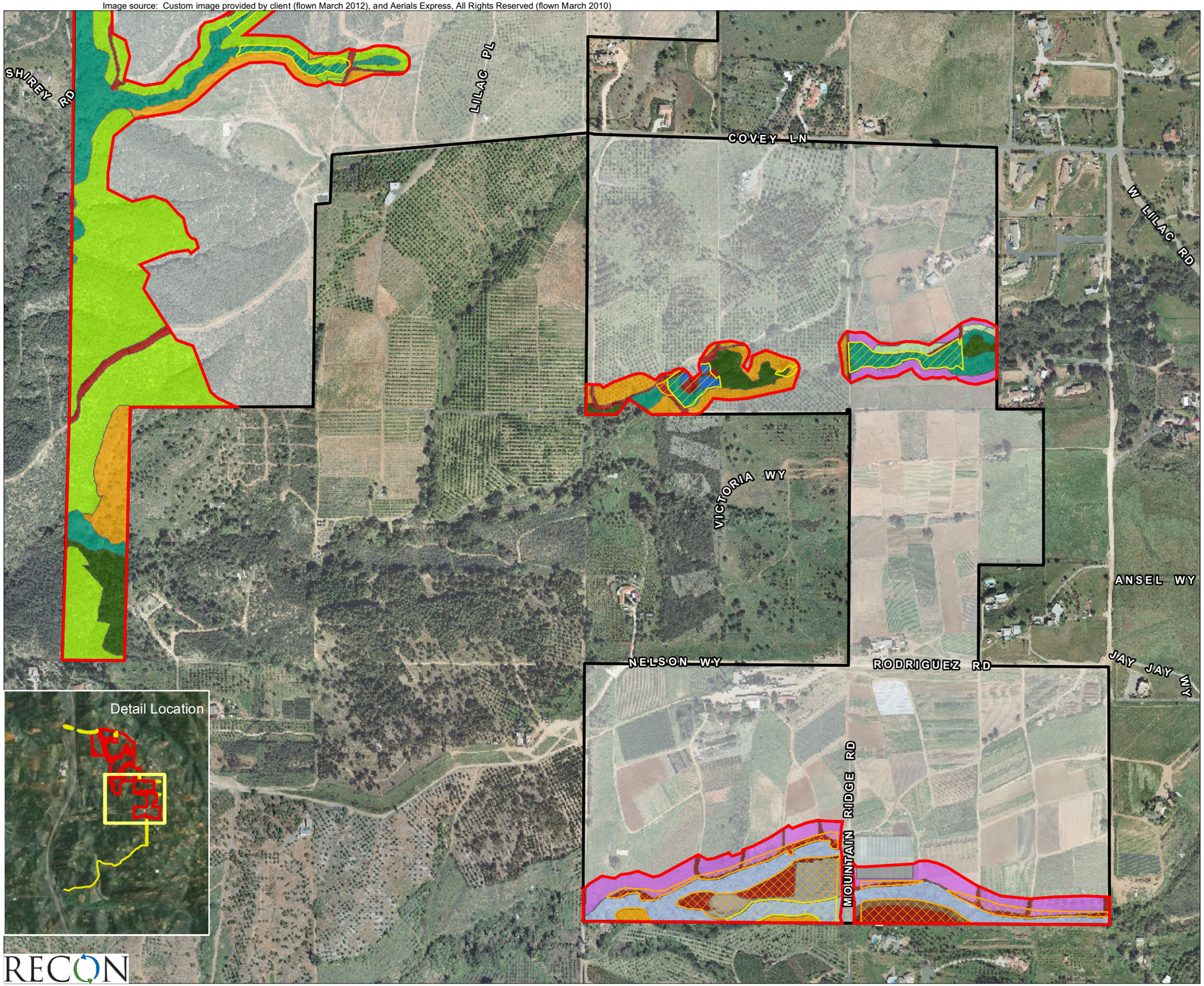

- Project Boundary
- Biological Open Space Boundary
- Wetland Creation
- Wetland Enhancement

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)
- 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)
- Extensive Agriculture - Row Crops
- Orchard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

0 Feet 500

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FIGURE 14b

Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation

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TABLE 9
SUMMARY OF MITIGATION MEASURES

Proposed Mitigation	Level of Significance after Mitigation	Guideline Number(s)
Biological Open Space/Conservation Easement of Fee Title Transfer of Open Space	Below significant	4.2; 4.3; 4.4
Off-site Purchase or Preservation of Habitat	Below significant	4.1B
Preparation and Implementation of Revegetation Plans	Below significant	4.2B; 4.3; 4.5C
Revegetation and/or Enhancement of Open Space	Below significant	4.2B; 4.3; 4.5C
Resource Management Plan	Below significant	4.2B; 4.3; 4.5C
Breeding Season Avoidance	Below significant	4.1H; 4.2D; 4.4D
Permanent Fencing/walls	Below significant	4.1H; 4.2D; 4.5C
Temporary Fencing	Below significant	4.1H; 4.2D; 4.4D
Evidence of Federal or State Permits	Below significant	4.3
Restrictions on Lighting, Runoff, Access, and/or Noise	Below significant	4.1H; 4.2D; 4.4D
Biological Monitoring	Below significant	4.1H; 4.2D; 4.4D
Wetland Buffer	Below significant	4.2E; 4.3; 4.4D
Limited Building Zone Easement	Below significant	4.1H; 4.2D; 4.4D

TABLE 10
LILAC HILLS RANCH ON-SITE BIOLOGICAL OPEN SPACE DEDICATION BY DEVELOPMENT PHASE

Development Phase	Biological Open Space Area Dedication*	Acres
1	OS1	1.4
1	OS2	3.2
1	OS3	1.3
1	OS4	0.7~~6~~
1	OS5	0.1
1	OS6	8.9~~5~~
2	OS7	9.0~~1~~
2	OS9	3.6
3	OS8	~~4~~4.2~~3.9~~
3	OS10	4.8~~6~~
4	OS11	5.3~~1~~
4	OS12	4.3~~1~~
5	OS13	10.8~~7~~
5	OS14	0.3~~6.5~~
5	OS15	6.2
TOTAL		10~~4~~.1~~2.7~~

*See Figure 15 for locations of biological open space areas.

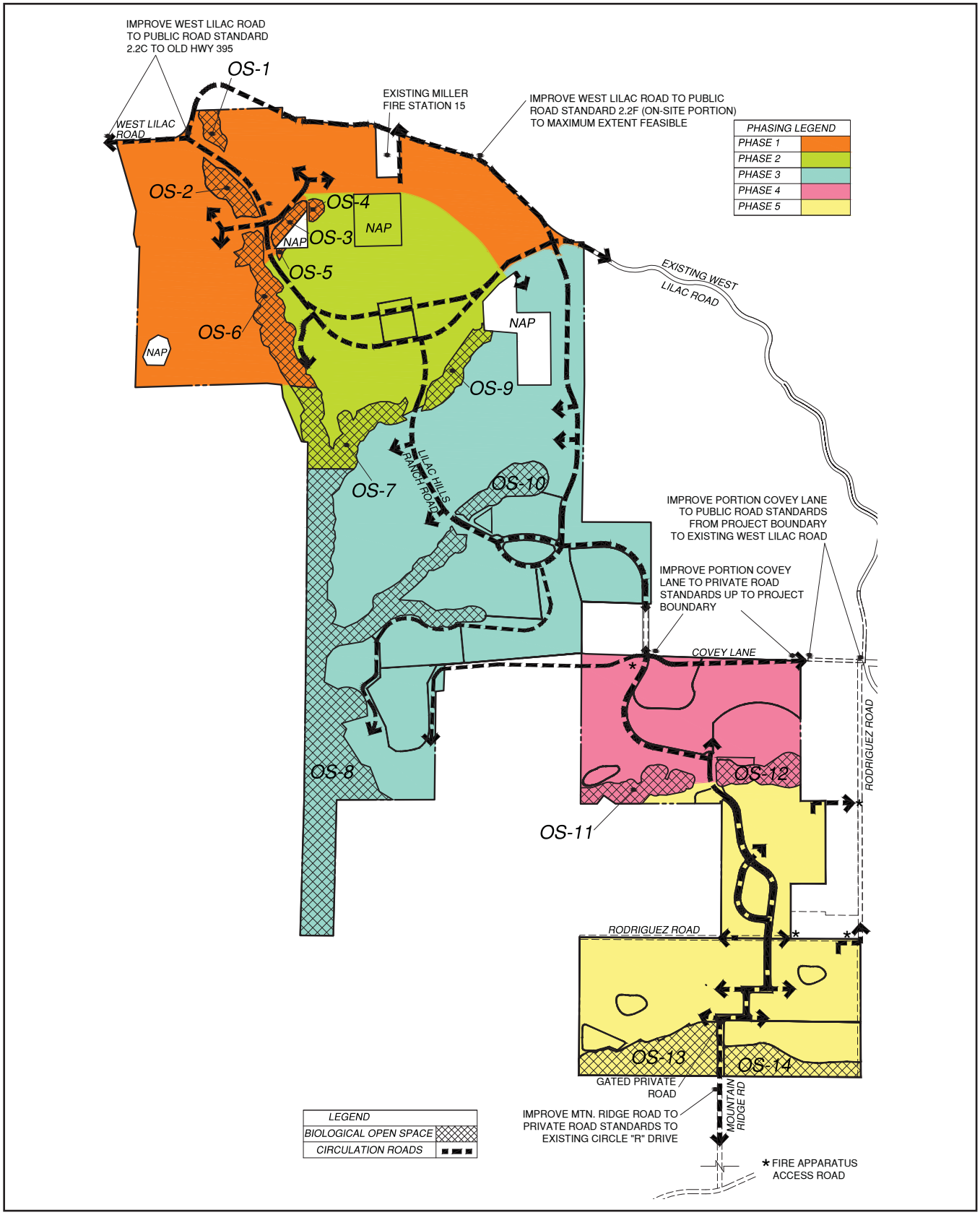

FIGURE 15
Biological Open Space Plan

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minimized by restrictions on construction activities during the sensitive avian breeding season or through the use of adequate noise attenuation measures. Any lighting adjacent to biological open space areas will be shielded and directed away from the habitat areas to reduce light pollution. Landscape plans for areas adjacent to biological open space areas will contain native plant species to reduce the potential for invasive species to disperse to the open space. Any storm water runoff from the project entering drainages will be treated according to storm water pollution standards prior to discharge into any open space areas. Signage and fences will be provided to reduce access to the biological open space areas, and trails will be restricted to existing roads. Implementation of Best Management Practices during and after construction would help reduce potential edge effects. Establishment of buffers of a minimum of 50 feet around the biological open space areas will help mitigate edge effects on these conserved lands.

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Wiedlin & Associates, Inc.

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10.0 List of Preparers

Gerald A. Scheid	Biologist, Author – on San Diego County List for Biological Resources
Anna Bennett	Biologist
Alex Fromer	Biologist
Megan Lahti	Biologist
John Lovio	Biologist
Erin McKinney	Biologist
Frank McDermott	GIS Supervisor
Sean Bohac	GIS Specialist
Chris Nixon	GIS Specialist
Stacey Higgins	Production Specialist
Eija Blocker	Production Specialist

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ATTACHMENTS

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ATTACHMENT 1

Post-Survey Notification of Focused Surveys for Least Bell's Vireo for the I-15/395 Master Planned Community MPA

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A Company of Specialists

September 29, 2011

Ms. Erin McCarthy
U.S. Fish and Wildlife Service
Carlsbad Field Office
6010 Hidden Valley Road, Suite 101
Carlsbad, CA 92011-4219

Reference: Post-Survey Notification of Focused Surveys for Least Bell's Vireo for the I-15/395 Master Planned Community MPA (RECON Number 6153)

Dear Ms. McCarthy:

The purpose of this letter is to notify the U.S. Fish and Wildlife Service (USFWS) of the focused survey results for the least Bell's vireo (*Vireo bellii pusillus*) conducted on the I-15/395 Master Planned Community Major Pre-Application (MPA) (project site). This approximately 518.3-acre project site is located within Valley Center, east of Interstate 15, south and west of West Lilac Road, and north of Elmond Drive and Megan Terrace. The project is in the eastern half of Sections 24 and 25, Township 10 South and Range 3 West; and Sections 19 and 30 in Township 10 South and Range 2 West on the Pala and Bonsall 7.5-minute quadrangles in San Diego County (U.S. Geological Survey 1996a and 1996b; Figures 1 and 2).

Methods

RECON biologists Erin McKinney and Megan Lahti (USFWS permit number TE-797665) conducted focused surveys for least Bell's vireo according to USFWS survey guidelines (USFWS 2001), which requires eight surveys at least 10 days apart between April 10 and July 31. Surveys were conducted by walking meandering transects throughout and adjacent to areas of suitable least Bell's vireo habitat. Approximately 27.86 acres of potentially suitable habitat for the least Bell's vireo is located within the project site (Figure 3). All bird species observed during the surveys were noted. Survey dates, times, and weather conditions are provided in Table 1.

Existing Conditions

The survey area supports approximately 19.59 acres of southern coast live oak riparian woodland, 1.82 acres of disturbed southern coast live oak riparian woodland, 6.21 acres of southern willow scrub, and 0.24 acre of disturbed southern willow scrub habitats for a total of approximately 27.86 acres of survey area (see Figure 3).

Dominant species within the southern coast live oak riparian woodland and disturbed southern coast live oak riparian woodland include black willow (*Salix gooddingii*), coast live oak (*Quercus agrifolia*), poison oak (*Toxicodendron diversilobum*), red willow (*Salix laevigata*), and wild grape (*Vitis girdiana*).

Dominant species within the southern willow scrub and disturbed southern willow scrub include arroyo willow (*Salix lasiolepis*), black willow, mule fat (*Baccharis salicifolia*), narrow-leaved willow (*Salix exigua*), and red willow.

TABLE 1
SURVEY DATES, TIMES, AND WEATHER CONDITIONS

Date	Survey	Personnel	Beginning Conditions	Ending Conditions	Acres Surveyed Per Hour
5/17/11	LBV #1	Erin McKinney Megan Lahti	6:30 A.M.; 50˚ F; winds 0–1 mph; 90% cloud cover	9:30 A.M.; 53˚ F; winds 0–1 mph; 100% cloud cover	4.64
5/27/11	LBV #2	Gerry Scheid Peter Dolan	7:30 A.M.; 57˚ F; winds 0 mph; 0% cloud cover	10:30 A.M.; 79˚ F; winds 0-1 mph; 0% cloud cover	4.64
6/6/11	LBV #3	Erin McKinney Megan Lahti	7;30 A.M.; 52˚ F; winds 0–1 mph; 5% cloud cover	11:00 A.M.; 70˚ F; winds 0–3 mph; 15% cloud cover	3.98
6/16/11	LBV #4	Gerry Scheid Megan Lahti	7:15 A.M.; 60˚ F; winds 0 mph; 100% cloud cover	11:00 A.M.; 70˚ F; winds 3-5 mph; 45% cloud cover	3.71
6/27/11	LBV #5	Erin McKinney Megan Lahti	7:30A.M.; 61° F; winds 0-1 mph; 0% cloud cover	11;00 A.M.; 75° F; winds 0-2 mph; 0% cloud cover	3.98
7/7/11	LBV #6	Erin McKinney Megan Lahti	7:50 A.M.; 72˚F; winds 0–1 mph;, 0% cloud cover	11:00 A.M.; 90˚F; winds 0–1 mph;, 0% cloud cover	4.39
7/18/11	LBV #7	Erin McKinney Megan Lahti	6:20 A.M.; 51° F; winds 0-1 mph; 0% cloud cover	10:00 A.M.; 76° F; winds 0-1 mph; 0% cloud cover	4.18
7/28/11	LBV #8	Erin McKinney Megan Lahti	7:15 A.M.; 61° F; winds 0-1 mph; 100% cloud cover	9:55 A.M.; 71° F; winds 0-2 mph; 2% cloud cover	4.92

LBV = least Bell's vireo; ° F = degrees Fahrenheit; mph = miles per hour; % = percent

Survey Results

No least Bell's vireo were observed on or directly adjacent to the project site. In addition, a Cooper's hawk (*Accipiter cooperii*), turkey vulture (*Cathartes aura*), yellow-breasted chat (*Icteria virens auricollis*), yellow warbler (*Dendroica petechia*), western bluebird (*Sialia mexicana occidentalis*), and white-tailed kite (*Elanus leucurus*) were detected. The locations of these sensitive bird species are shown in Figure 3. The brood parasitic species brown-headed cowbird (*Molothrus ater*) was also detected on-site during the surveys (see Figure 3).

Birds commonly observed during the surveys included American crow (*Corvus brachyrhynchos hesperis*), Anna's hummingbird (*Calypte anna*), black-headed grosbeak (*Pheucticus melanocephalus maculatus*), bushtit (*Psaltriparus minimus*), California towhee (*Pipilo crissalis*), common yellowthroat (*Geothlypis trichas*), house finch (*Carpodacus mexicanus frontalis*), lesser goldfinch (*Carduelis psaltria hesperophilus*), spotted towhee (*Pipilo maculatus*), and western scrub-jay (*Aphelocoma californica*). Additionally, a red-shouldered hawk (*Buteo lineatus elegans*) and a red-tailed hawk (*Buteo jamaicensis*) were observed flying over the survey area.

If you have any questions concerning the contents of this notification letter, please contact me.

Sincerely,

Erin McKinney
Associate Restoration Biologist

cc: Jon Rilling, The Accretive Group of Companies
Rikki Schroeder, RMA Consultants

References Cited

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1996a Bonsall Quadrangle, CA 7.5-minute series topographic map.

1996b Pala Quadrangle, CA 7.5-minute series topographic map.

U.S. Fish and Wildlife Service (USFWS)
2001 Least Bell's Vireo Survey Guidelines. January 19.

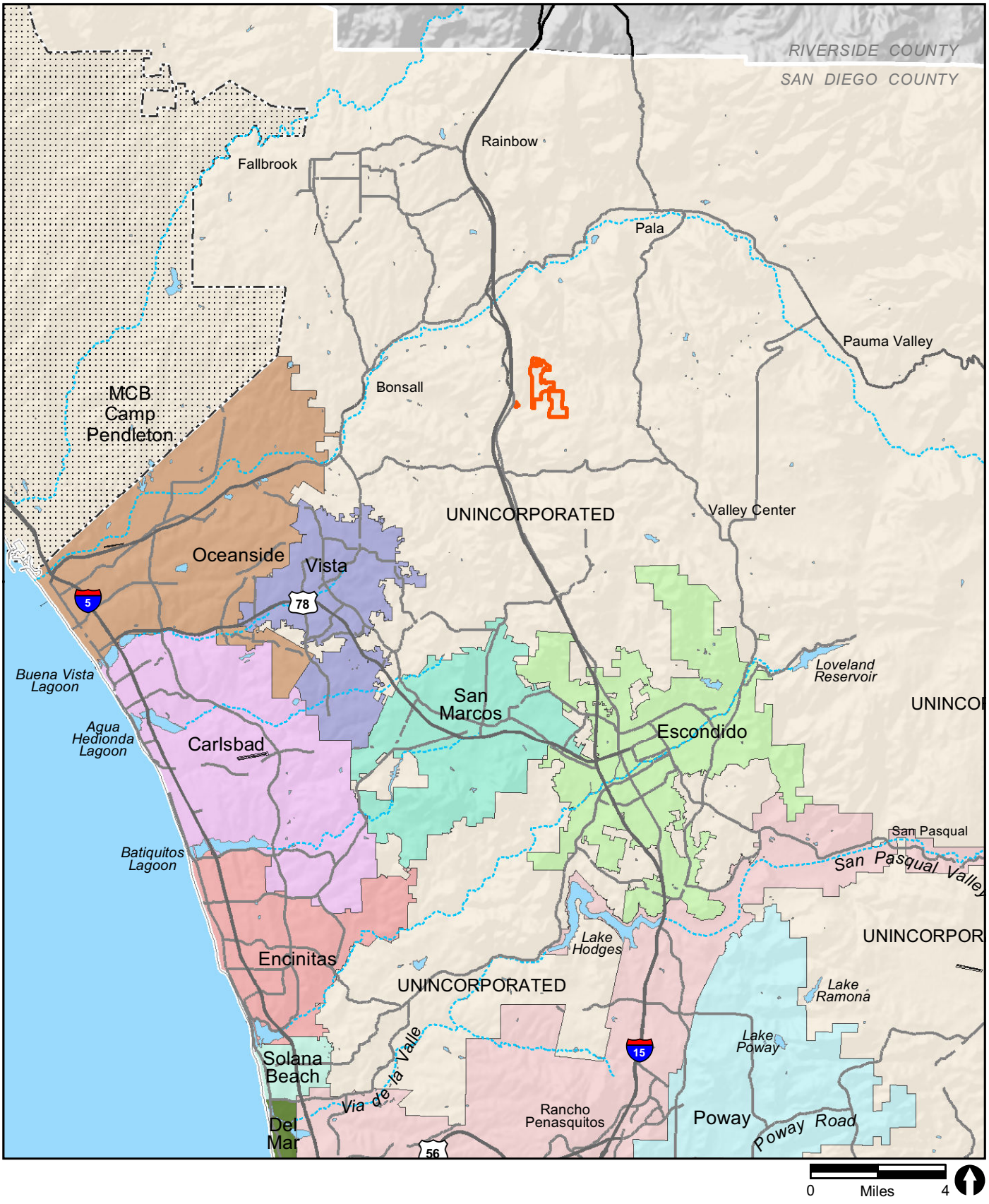
I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Unavailable for signature **9/29/11**
Peter Dolan Date
Permit Number TE-797665

Unavailable for signature **9/29/11**
Megan Lahti Date
Permit Number TE-797665

Erin McKinney **9/29/11**
Erin McKinney Date
Permit Number TE-797665

Gerry Scheid **9/29/11**
Gerry Scheid Date
Permit Number TE-797665



Project Boundary

FIGURE 1

Regional Location

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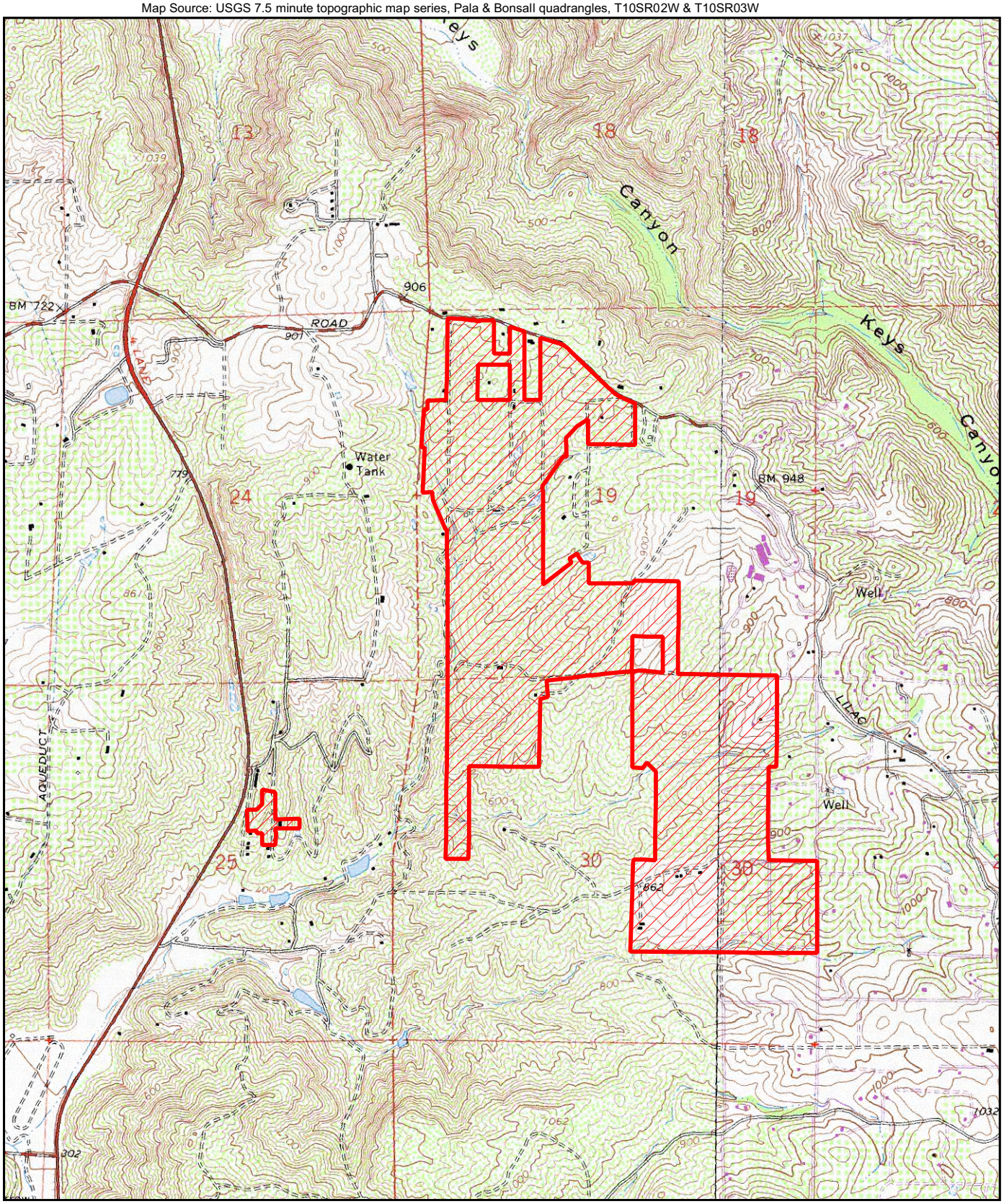
LL-32444-E

DRAFT

Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



Project Boundary

RECON

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FIGURE 2

Project Location on USGS Map

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LANCASTER MTN RD
W LILAC RD
STANDEL LN
ROCKING HORSE RD
LILAC WK
NUTBY LN
15
OLD HIGHWAY 395
SHIREY RD
LILAC PL
COVEY LN
RITSON RD
ANSEL WY
RODRIGUEZ RD
NELSON WY
MOUNTAIN RIDGE RD
ELMOND DR
MEGAN TR
SHADOW LAKE

0 Feet 1,000

Survey Area Boundary
LBV Survey Area

Vegetation Communities
- Southern Coast Live Oak Riparian Woodland (61310)
- Disturbed Southern Coast Live Oak Riparian Woodland (61310)
- Southern Willow Scrub (63320)
- Disturbed Southern Willow Scrub (63320)

Sensitive Species
- Cooper's Hawk
- Turkey Vulture
- Western Bluebird
- White-tailed Kite
- Yellow-breasted Chat
- Yellow Warbler

Brood Parasitic Species
- Brown-headed Cowbird

FIGURE 3

Least Bell's Vireo Survey Area
and Biological Resources

RECON

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ATTACHMENT 2

Post-Survey Notification of Focused Surveys for Coastal California Gnatcatcher I-15/395 Master Planned Community MPA

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1504 West Fifth Street
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F 512.474.1849

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A Company of Specialists

September 28, 2011

Ms. Erin McCarthy
U.S. Fish and Wildlife Service
Carlsbad Field Office
6010 Hidden Valley Road, Suite 101
Carlsbad, CA 92011-4219

Reference: Post-Survey Notification of Focused Surveys for Coastal California Gnatcatcher for the I-15/395 Master Planned Community Major Pre-Application (RECON Number 6153)

Dear Ms. McCarthy:

This letter describes the results of focused surveys for the federally threatened coastal California gnatcatcher (*Polioptila californica californica*) conducted on the I-15/395 Master Planned Community Major Pre-Application (MPA) (project site). This approximately 518.3-acre project site is located within Valley Center, east of Interstate 15, south and west of West Lilac Road, and north of Elmond Drive and Megan Terrace. The project is in the eastern half of Sections 24 and 25, Township 10 South and Range 3 West; and Sections 19 and 30 in Township 10 South and Range 2 West on the Pala and Bonsall 7.5-minute quadrangles in San Diego County (U.S. Geological Survey 1996a and 1996b; Figures 1 and 2).

Methods

RECON biologists Erin McKinney (permit number TE-797665) and Megan Lahti (under supervision) conducted the focused surveys for coastal California gnatcatcher in July and August 2011. The survey area consisted of approximately 21.70 acres of coastal sage scrub within the project site. The surveys were conducted in accordance with U.S. Fish and Wildlife Service (USFWS) survey protocol (1997). All bird species observed during the surveys were noted. Survey dates, times, and weather conditions are provided in Table 1.

Existing Conditions

Total estimated acreage of survey area for coastal California gnatcatcher within the project site was originally assessed at approximately 70 acres of suitable coastal sage scrub habitat. We reduced the suitable coastal sage scrub acreage to 21.70 acres after reassessing the suitable habitat on the project site during subsequent surveys (Figure 3). The approximately 21.70-acre area supports both coastal sage scrub and disturbed coastal sage scrub. Dominant species within the coastal sage scrub and disturbed coastal sage scrub include California sagebrush (*Artemisia californica*), common encelia (*Encelia californica*), and California buckwheat (*Eriogonum fasciculatum*).

TABLE 1
SURVEY DATES, TIMES, AND WEATHER CONDITIONS

Date	Surveyors	Beginning Conditions	Ending Conditions	Acres/Hour
7/26/11	Erin McKinney Megan Lahti	6:40 A.M.; 58°F; winds 0-1 mph; clear conditions, 100% cloud cover	11:45 A.M.; 86°F; winds 0–1 mph; clear conditions, 0% cloud cover	2.14
8/2/11	Erin McKinney Megan Lahti	6:45 A.M.; 71°F; winds 0–1 mph; clear conditions, 60% cloud cover	10:30 A.M.; 88°F; winds 0–1 mph; clear conditions, 1% cloud cover	2.89
8/9/11	Erin McKinney Megan Lahti	6:40 A.M.; 56°F; winds 0-1 mph; cloudy conditions, 100% cloud cover	10:35 A.M.; 76°F; winds 1–4 mph; clear conditions, 45% cloud cover	2.77

°F = degrees Fahrenheit; mph = mile per hour; % = percent

Survey Results

No coastal California gnatcatchers were observed on or directly adjacent to the project site.

Birds commonly observed during the surveys included Anna's hummingbird (*Calypte anna*), California towhee (*Pipilo crissalis*), bushtit (*Psaltriparus minimus minimus*), Bewick's wren (*Thyromanes bewickii*), western scrub-jay (*Aphelocoma californica*), and wrentit (*Chamaea fasciata henshawi*). In addition, a white-tailed kite (*Elanus leucurus*), a red-shouldered hawk (*Buteo lineatus elegans*), and a red-tailed hawk (*Buteo jamaicensis*) were observed flying over the survey area.

If you have any questions concerning the contents of this notification letter, please contact me.

Sincerely,

Erin McKinney
Associate Restoration Biologist

EJM:sh

cc: John Rilling, The Accretive Group of Companies
Rikki Schroeder, RMA Consultants

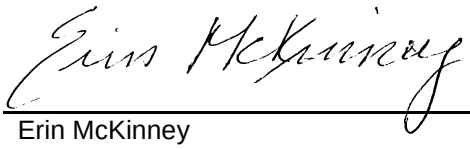
References Cited

U.S. Geological Survey (USGS)
1996a Bonsall, CA Quadrangle 7.5-minute series topographic map.

1996b Pala, CA Quadrangle 7.5-minute series topographic map.

U.S. Fish and Wildlife Service (USFWS)
1997 Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol.

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

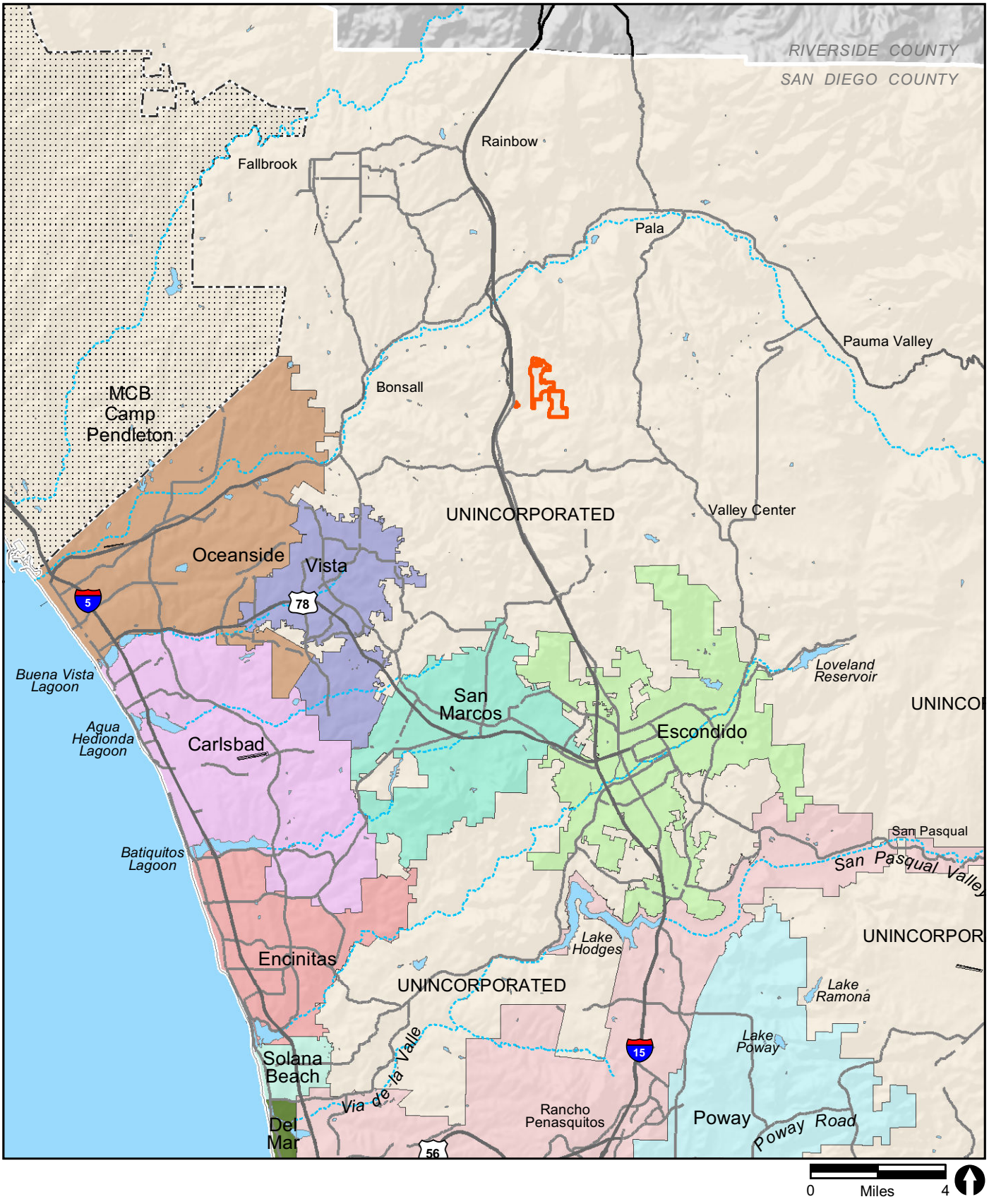


9/28/11

Erin McKinney — Date
Permit Number TE-797665

Unavailable for signature **9/28/11**

Megan Lahti — Date
Permit Number TE-797665



Project Boundary

FIGURE 1

Regional Location

RECON

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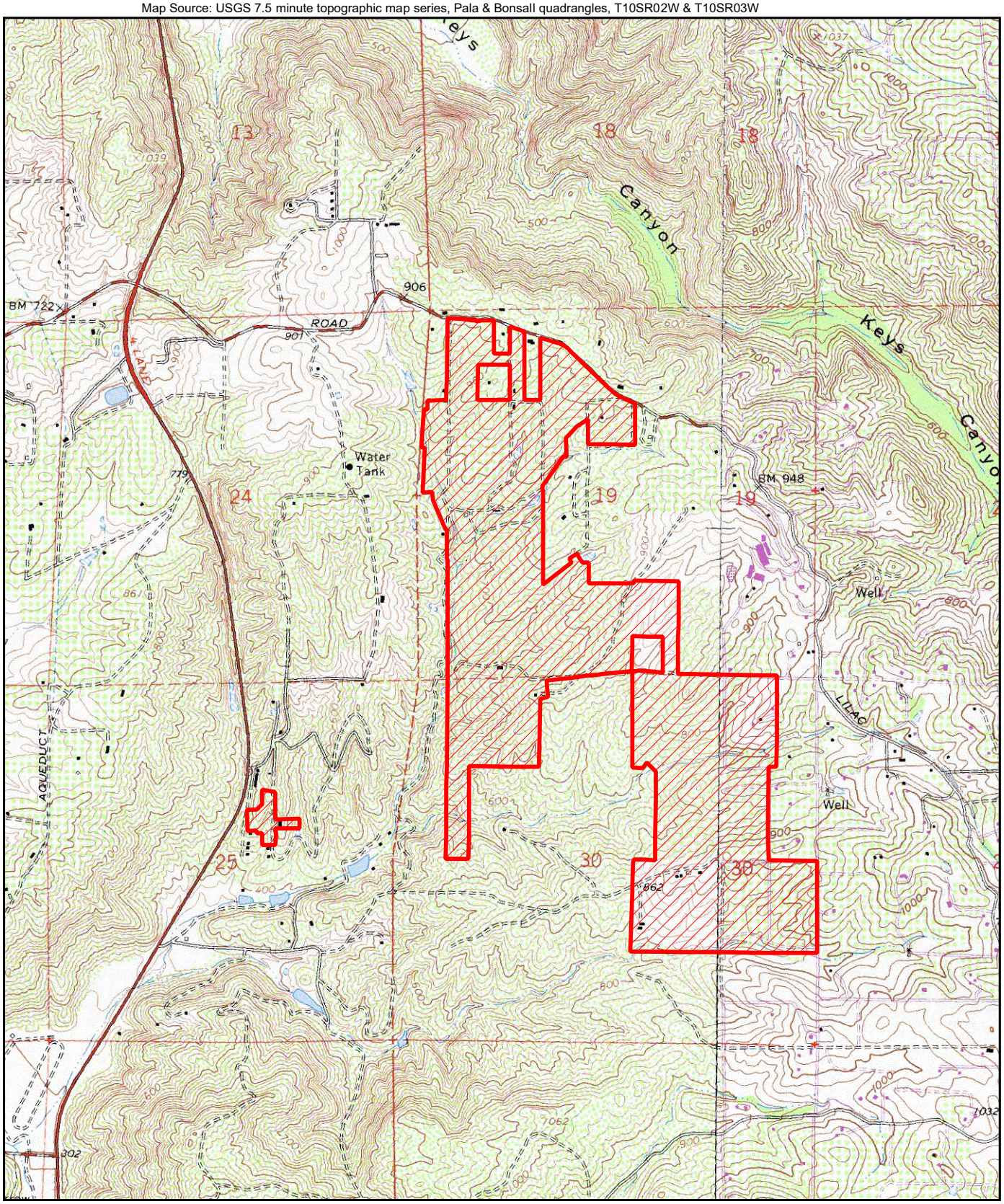
Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



Project Boundary

RECON

M:\JOBS4\6153\common_gis\fig2.mxd 5/17/2011

FIGURE 2

Project Location on USGS Map

LL-32444-E

DRAFT

JONES WY
LANCASTER MTN RD
STANDEL LN
W LILAC RD
LILAC WK
NUTBY LN
15
ROCKING HORSE RD
LILAC PL
OLD HIGHWAY 395
SHIREY RD
COVEY LN
RITSON RD
ANSEL WY
RODRIGUEZ RD
NELSON WY
MOUNTAIN RIDGE RD
ELMOND DR
MEGAN TR
SHADOW LAKE

Project Boundary

Vegetation Communities

Coastal Sage Scrub (32520)

Disturbed Coastal Sage Scrub (32520)

0 Feet 1,000

FIGURE 3

RECON

CAGN Survey Area and Biological Resources

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ATTACHMENT 3

Southwestern Willow Flycatcher Habitat Assessment Report

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August 14, 2012

Mr. Jon Rilling
Accretive Group of Companies
12275 El Camino Real, Ste. 110
San Diego, CA 92130

Reference: I-15/395 Master Planned Community MPA – Southwestern Willow Flycatcher Habitat Assessment (RECON Number 6153)

Dear Mr. Rilling:

This letter presents the results of a habitat assessment conducted to determine the potential for suitable habitat areas within the I-15/395 Master Planned Community Major Pre-Application site (project area) to support the federally listed endangered southwestern willow flycatcher (*Empidonax trallii extimus*). No southwestern willow flycatcher individuals were observed during this habitat assessment or during other general biology surveys conducted in the project area in 2011/2012 (RECON 2012). Only one location in the project area had habitat characteristics that might be preferred by the southwestern willow flycatcher; however, this location was considered unlikely to support the species as described below.

Site Description

The project area is located in northern San Diego County just east of Mount Ararat and Interstate 15 and north of Moosa Canyon (Figure 1). It occurs to the south and west of Lilac Road with Keys Canyon to the north, Valley Center to the east, Moosa Canyon to the south, and Interstate 15 and Bonsall to the west (Figure 2). Of the approximately 608-acre project area, about 33.7 acres of riparian habitat were assessed for the potential to support the southwestern willow flycatcher (Figure 3).

The 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 above mean seal level at the highest to 750 feet above mean sea level at the lowest.

Vegetation communities and habitat types that are found in the project survey area occur as a mosaic of native habitat patches and agricultural areas (i.e., row crops, orchards, vineyards, a nursery). 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 16 primary habitat types and vegetation communities were identified in the project survey area (see Figure 3). Some areas of these habitat types/vegetation communities have portions that were characterized as disturbed.

Assessment of Habitat Suitability for Southwestern Willow Flycatcher

In general, southwestern willow flycatcher prefers riparian habitat dominated by willows, tamarisk, or Russian olive (USFWS 2002). The riparian vegetation structure is generally characterized by individual trees of different size classes with a recognizable sub-canopy and dense understory of mixed shrubs and herbaceous species. Breeding habitat for the species requires the riparian habitat to be near or adjacent to surface water or underlain by saturated soils. Thickets of riparian trees and shrubs used for nesting range in height from 6 feet to 98 feet, with nest sites having dense foliage from the ground level up to approximately 13 feet above ground. Southwestern willow flycatchers are generally not found in confined floodplains or in single narrow strips of riparian vegetation less than approximately 33 feet wide (USFWS 2011).

Areas within the project site that have riparian vegetation were assessed for the potential to support the southwestern willow flycatcher (see Figure 3; Table 1). Riparian habitats in the project area are confined to the narrow drainage courses. These habitats comprise southern willow scrub, southern riparian scrub, and southern coast live oak riparian forest. The riparian areas were assessed to determine if they contained the vegetation composition, structure, and other habitat characteristics preferred by the southwestern willow flycatcher.

TABLE 1
SOUTHWESTERN WILLOW FLYCATCHER HABITAT ASSESSMENT SURVEY INFORMATION

Survey Date	Type of Survey	Time	Biologist Conducting Survey
August 26, 2011	Southwestern Willow Flycatcher Habitat Assessment	8:00 A.M. – 3:00 P.M.	GAS, JCL
January 11, 2012	Southwestern Willow Flycatcher Habitat Assessment	8:00 A.M. – 4:00 P.M.	GAS, JCL
February 14, 2012	Southwestern Willow Flycatcher Habitat Assessment	8:00 A.M. – 4:00 P.M.	GAS
March 21, 2012	Southwestern Willow Flycatcher Habitat Assessment	8:00 A.M. – 4:00 P.M.	GAS

Biologists: GAS = Gerry Scheid; JCL = John Lovio

The southern coast live oak riparian woodlands in the project area were not considered suitable habitat for the southwestern willow flycatcher due to the lack of a significant willow component. These oak riparian woodlands are more open and lack the dense understory vegetation required by the species for nesting. The riparian scrub vegetation in the northwest portion of the project site supports a dense stand of willows with little to no understory vegetation. This area lacks the understory and tree structure to be considered habitat for the southwestern willow flycatcher. The willow scrub vegetation in the southeastern portion of the site comprises a dense stand of willows with a dense understory of riparian shrubs, but only portions of this habitat type at the west end contained the tree structure preferred by the southwestern willow flycatcher. However, this habitat area is narrow, relatively small in acreage, and lacks the surface water component of suitable willow flycatcher nesting habitat. Therefore, this one area was considered to have a low to moderate potential to support the species.

A search of the California Natural Diversity Data Base (State of California 2007) for documented southwestern willow flycatcher occurrences confirmed that this species has been documented in the following areas of San Diego County: Sweetwater Reservoir, El Capitan Reservoir, San Dieguito River near Escondido, Buena Vista Creek near Carlsbad, Santa Margarita River on Camp Pendleton, and several locations along the San Luis Rey River near Oceanside, Pala, and Bonsall. Occurrences of southwestern willow flycatcher on the San Luis Rey River are

documented approximately 2.8 miles north, 47 miles west, and 5.0 miles northeast of the project area. Critical habitat for southwestern willow flycatcher has been designated along the San Luis Rey River. While the project area lies within the historic range of this species and is also within two to five miles of occupied habitat along the San Luis Rey River, there is only a low potential for this species to nest in the southern willow scrub habitat in it. One relatively small portion of the southern willow scrub habitat on-site has the vegetation composition and structure preferred for nesting by the species, but lacks surface water, is narrow, and occurs adjacent to agricultural activities that reduce the suitability of the habitat for breeding by the species. While a protocol survey for the southwestern willow flycatcher was not conducted in 2011, this species was not detected on-site during general bird surveys or protocol surveys for least Bell's vireo (*Vireo bellii pusillus*) that overlapped a portion of the 2011 southwestern willow flycatcher breeding season.

If you have any questions regarding this habitat assessment, please contact me.

Sincerely,

Gerry Scheid
Senior Biologist

GAS:eab:sh

cc: Rikki Schroeder, RMA Consultants

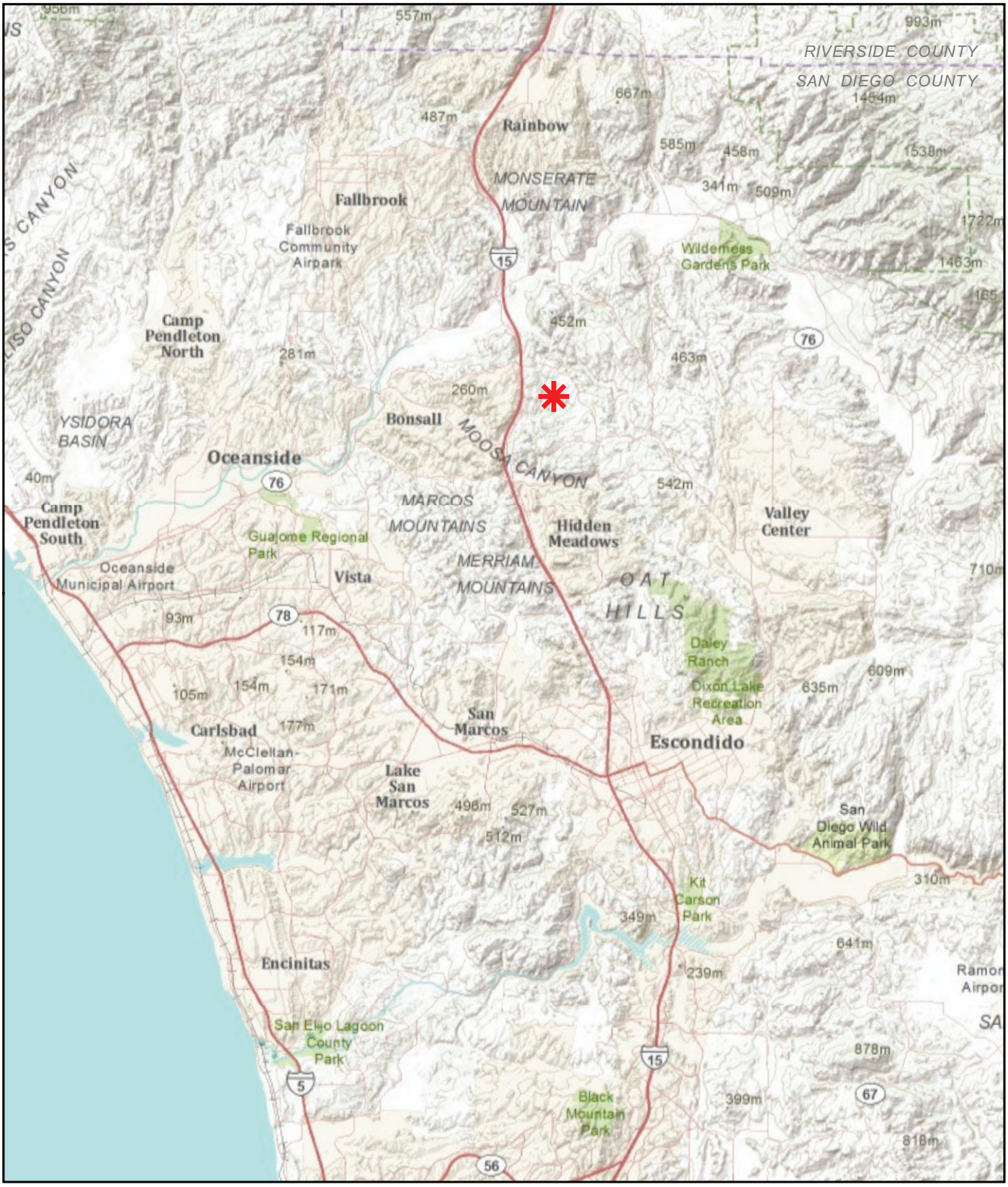
References Cited

California, State of
2007 California Natural Diversity Database: Electronic Database with Annual Updates. Wildlife & Habitat Data Analysis Branch, Department of Fish and Game.

RECON
2011 Biological Resource Report for the I-15/395 Master Planned Community MAP (Case # 3992-10-025).

U.S. Fish and Wildlife Service (USFWS)
2002 Final Recovery Plan Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Prepared by Southwestern Willow Flycatcher Recovery Team Technical Subgroup for U.S. Fish and Wildlife Service, Region 2. August 2.

2011 Endangered and Threatened Wildlife and Plants; Designation of Revised Critical Habitat for Southwestern Willow Flycatcher. Federal Register 76:157:50542-50629.



Project Location

FIGURE 1

Regional Location

RECON

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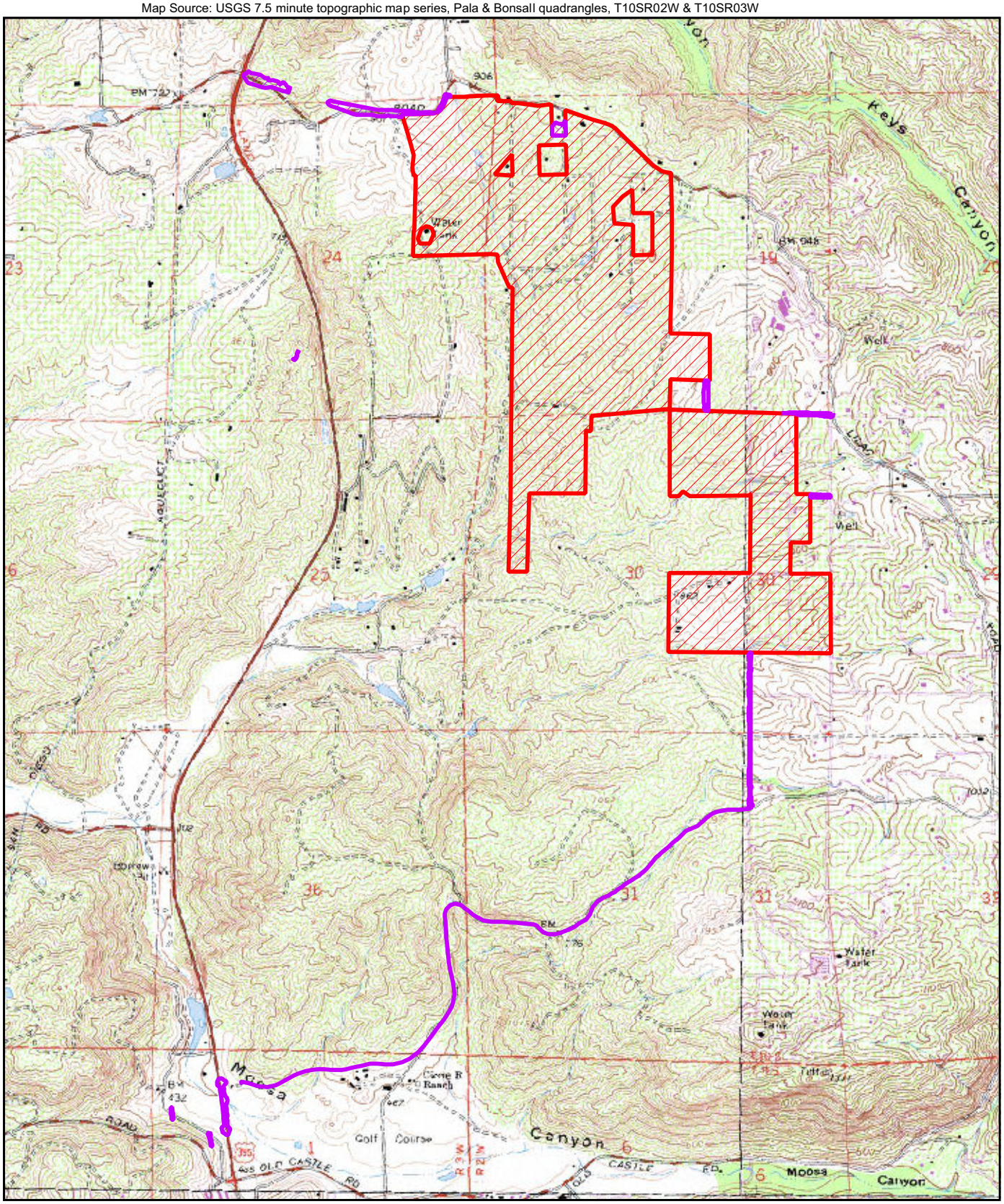
Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



Project Boundary

Off-site Improvement Areas

RECON

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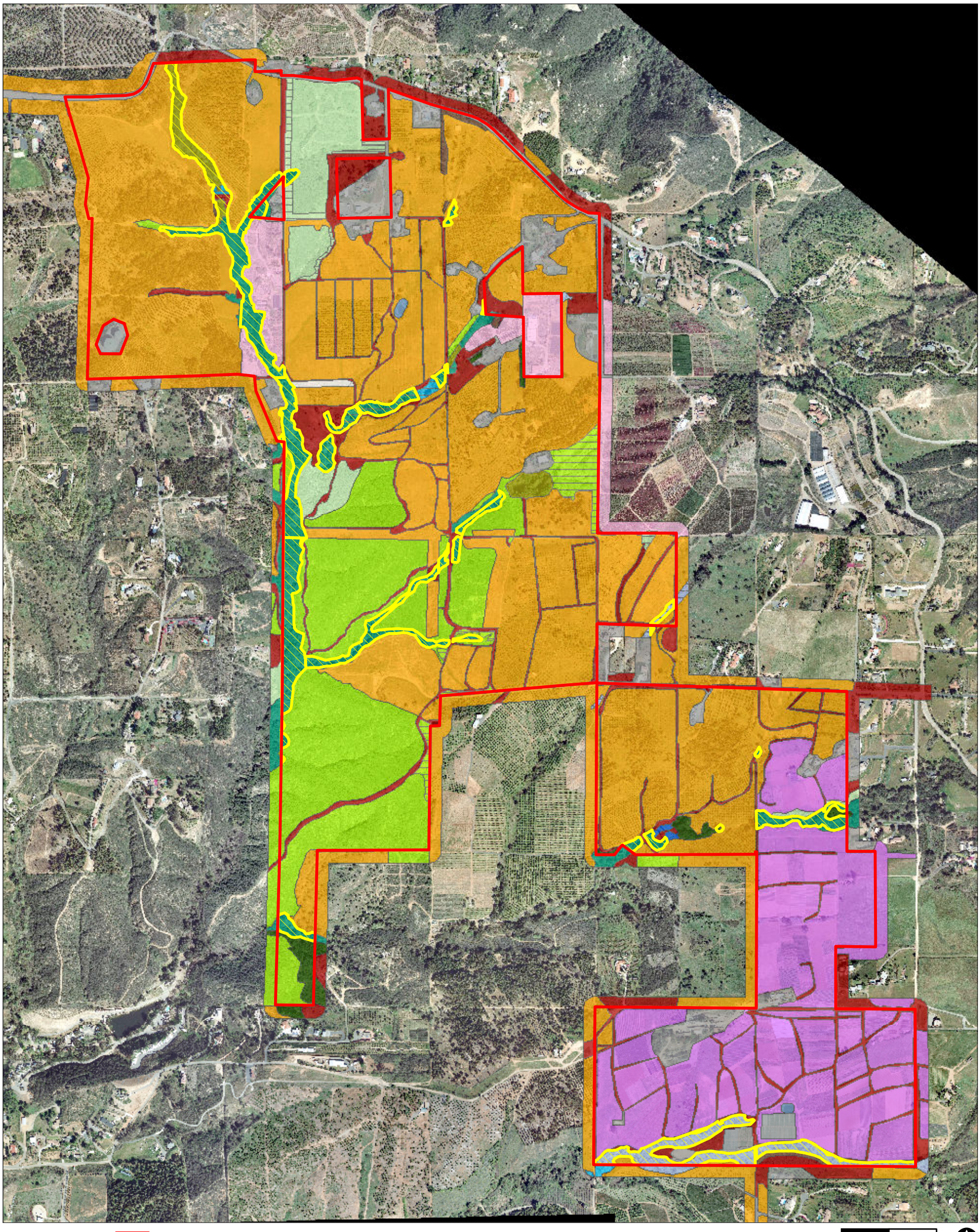
FIGURE 2

Project Location on USGS Map



Project Boundary
Willow Flycatcher Habitat Assessment 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 Coastal/Valley Freshwater Marsh (52410)
- Disturbed Wetland (11200)
- Eucalyptus Woodland (79100)
- Mule Fat Scrub (63310)
- 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 Riparian Woodland (62500)
- Southern Willow Scrub (63320)
- Disturbed Southern Willow Scrub (63320)
- Open Water - Fresh Water Agriculture Pond (64140)
- Extensive Agriculture - Row Crops (18320)
- Intensive Agriculture - Nursery (18200)
- Orchard (18100)
- Vinyard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

0 Feet 800

FIGURE 3

Vegetation Communities, Land Cover Types, and Southwestern Willow Flycatcher Habitat Assessment Areas

RECON

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ATTACHMENT 4

Burrowing Owl Habitat Assessment Report

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August 14, 2012

Mr. Jon Rilling
Accretive Group of Companies
12275 El Camino Real, Ste. 110
San Diego, CA 92130

Reference: I-15/395 Master Planned Community MPA - Burrowing Owl Habitat Assessment
(RECON Number 6153)

Dear Mr. Rilling:

This letter presents the results of an assessment conducted to determine the potential for suitable habitat areas within the I-15/395 Master Planned Community Major Pre-Application site (project area) to support burrowing owl (*Athene cunicularia hypugaea*). No burrowing owl individuals were observed during this habitat assessment or during other general biology surveys conducted in the project area in 2011/2012 (RECON 2012). While general habitat characteristics for burrowing owl are present in some portions of the site, no suitable burrows, burrow complexes, or other sign were observed in the survey area or buffer that indicate that burrowing owls are using the site.

Site Description

The project area is located in northern San Diego County just east of Mount Ararat and Interstate 15 and north of Moosa Canyon (Figure 1). It occurs to the south and west of Lilac Road with Keys Canyon to the north, Valley Center to the east, Moosa Canyon to the south, and Interstate 15 and Bonsall to the west (Figure 2). Of the approximately 608-acre project area, about 197.34 acres were considered to have the general habitat characteristics needed to support burrowing owl (Figure 3). An additional 500-foot buffer around each survey area was included in the assessment of habitat.

The 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 above mean seal level at the highest to 750 feet above mean sea level at the lowest.

Vegetation communities and habitat types that are found in the project survey area occur as a mosaic of native habitat patches and agricultural areas (i.e., row crops, orchards, vineyards, nursery). 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 16 primary habitat types and vegetation communities were identified in the project survey area (see Figure 3). Some areas of these habitat types/vegetation communities have portions that were characterized as disturbed.

Wildlife observed during the habitat assessments included common side-blotched lizard (*Uta stansburiana*), red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaida macroura marginella*), greater roadrunner (*Geococcyx californianus*), black phoebe (*Sayornis nigricans semiatra*), American crow (*Corvus brachyrhynchos hesperis*), house wren (*Troglodytes aedon parkmanii*), northern mocking bird (*Mimus polyglottos polyglottos*), song sparrow (*Melospiza melodia*), California towhee (*Pipilo crissalis*), lesser goldfinch (*Carduelis psaltria hesperophilus*), and house finch (*Carpodacus mexicanus frontalis*).

Assessment of Habitat Suitability for Burrowing Owls

The survey areas within the project site assessed for burrowing owl met the general habitat characteristics outlined in the survey protocol (California Burrowing Owl Consortium 1993). Burrowing owl habitat includes annual and perennial grasslands, desert, and scrublands having low-growing vegetation (Shuford and Gardali 2008). Habitats with tree and shrubs that cover less than 30 percent of the ground surface may also be used by burrowing owls. Agricultural fields can be used by burrowing owls if suitable habitat areas are adjacent to them (Bartok and Conway 2010). Areas within the project site that have row-crops, open orchards, or non-native grassland vegetation were considered the most suitable areas to potentially support burrowing owl (see Figure 3). These formed the habitat assessment survey area along with a 500-foot buffer around each survey area.

The survey areas were walked on-foot to determine the suitability of the habitats to support burrowing owl (Table 1). Evidence of the presence of suitable burrows, burrow complexes, or other sign of burrowing owl use (e.g., molted feathers, cast pellets, prey remains, egg shell fragments, or excrement at or near a burrow entrance) were looked for in each area. Portions of the 500-foot buffer area that contained suitable habitat characteristics were also examined for sign of burrowing owl use. Some buffer areas extended off-site on private land that was not accessible other than by sight.

TABLE 1
BURROWING OWL HABITAT ASSESSMENT SURVEY INFORMATION

Survey Date	Type of Survey	Time	Weather Conditions	Biologist Conducting Survey*
June 2, 2011	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, ML
June 3, 2011	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, ML
July 6, 2011	General Biology Surveys; Burrowing Owl Habitat Assessment	8:00 A.M. – 3:00 P.M.	61- 76° F; winds 0-7 mph; partly cloudy	GAS
August 26, 2011	Burrowing Owl Habitat Assessment	10:00 A.M. – 3:00 P.M.	85- 90° F; winds calm 1-3 mph; clear.	GAS, JCL
January 11, 2012	Burrowing Owl Habitat Assessment	8:00 A.M. – 4:00 P.M.	50–53° F; winds 0–1 mph; cloudy conditions	GAS
February 14, 2012	Burrowing Owl Habitat Assessment	8:00 A.M. – 4:00 P.M.	57–60° F; winds 0–1 mph; clear conditions	GAS
March 21, 2012	Burrowing Owl Habitat Assessment	8:00 A.M. – 4:00 P.M.	65–72° F; winds 2–5 mph; clear conditions	GAS

° F = degrees Fahrenheit

*EJM = Erin McKinney; GAS = Gerry Scheid; JCL = John Lovio; ML = Megan Lahti

No suitable burrows or burrow complexes were observed within the agricultural fields and open orchards. Burrows that were observed were created by small rodents and were too small for use by burrowing owls. No ground squirrel- or rabbit-sized burrows were observed in the survey area. No sign of burrowing owl use of the survey area was observed.

The lack of suitable burrows and burrow complexes in areas considered most suitable for burrowing owl in the project area is likely the result of human activity. Agricultural fields and the areas between the young orchard trees are tilled on a regular basis for crop production and vegetation control, resulting in an environment that is disturbed and difficult to maintain an active burrow in. In addition, pest control in and around the agricultural fields and orchards likely have reduced the populations of ground squirrels and rabbits in the area, reducing both the potential for suitable burrows for owls and a prey source. Non-native grassland vegetation both on-site and off-site within the buffer area is too dense and too tall to be preferred by burrowing owls.

A search of the California Natural Diversity Data Base (State of California 2007) for documented burrowing owl occurrences confirmed that burrowing owls have been documented primarily in the southern portion (e.g., Point Loma, Coronado, National City, and Otay Mesa) and eastern portion of San Diego County around Ramona. The project area lies within the historic range of this species, but is not in a portion of San Diego County considered within the species' current breeding range (Shuford and Gardali 2008). These facts indicate that there is a low potential for there to be existing burrowing owl populations in the vicinity of the project area to serve as a source of immigration. Therefore, the likelihood of burrowing owls to be present in the project area is low based on the condition of the potentially suitable habitats on-site, lack of burrows/burrow complexes and ground squirrel/rabbit populations, and lack of nearby known populations of this species.

If you have any questions regarding this habitat assessment, please contact me.

Sincerely,

Gerry Scheid
Senior Biologist

GAS:sjg:sh

cc: Rikki Schroeder, RMA Consultants

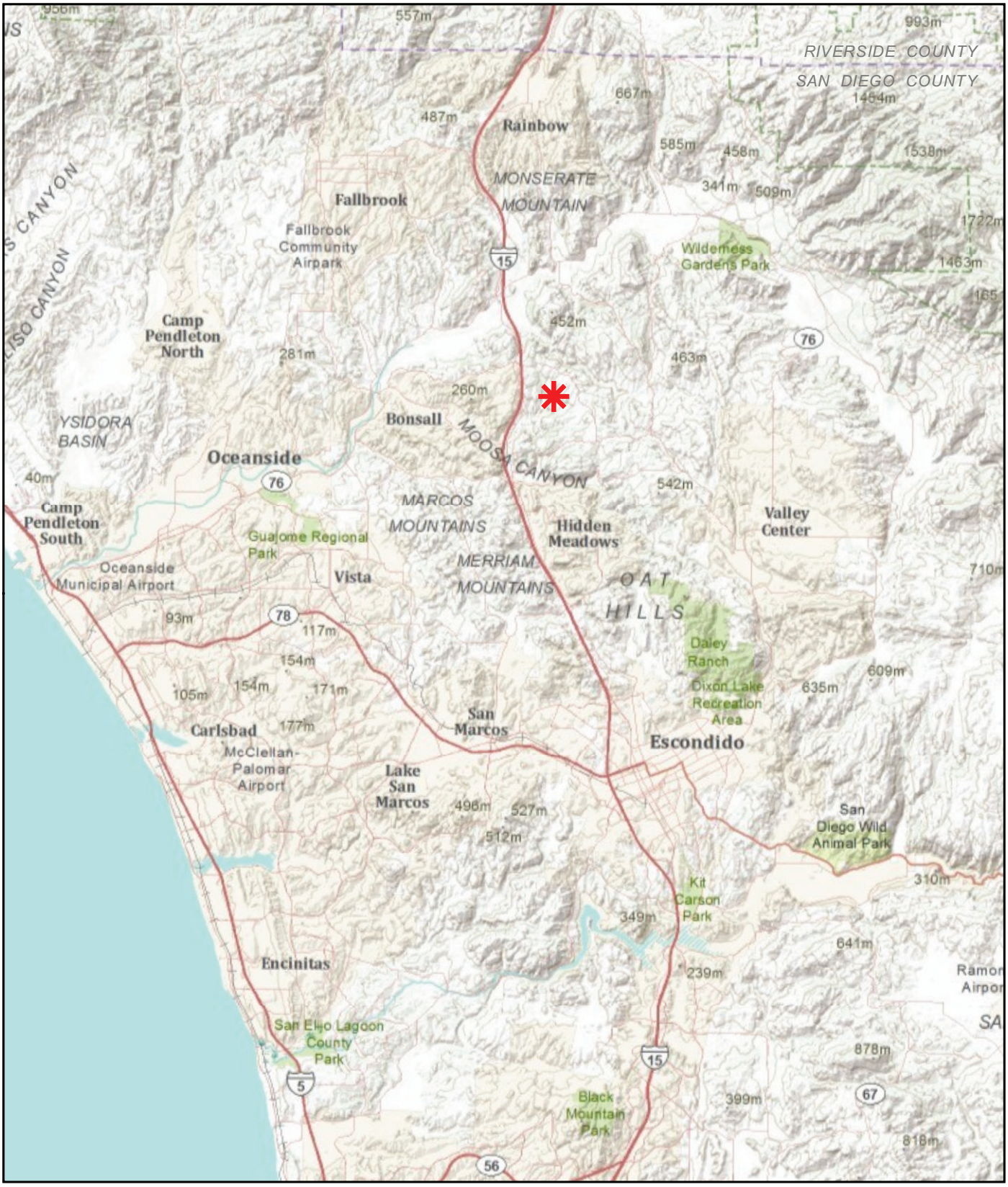
References Cited

California Burrowing Owl Consortium
1993 Burrowing Owl Survey Protocol and Mitigation Guidelines. April.

California, State of
2007 California Natural Diversity Database: Electronic Database with Annual Updates. Wildlife & Habitat Data Analysis Branch, Department of Fish and Game.

Bartok, N. D., and C. J. Conway
2010 Factors Affecting the Presence of Nesting Burrowing Owls in an Agricultural Landscape. Journal of Raptor Research 44(4):286-293.

Shuford, W. D. and T. Gardali, editors
2008 California Birds Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California. Studies of Western Birds I. Species Accounts: Burrowing Owl (*Athene cunicularia*). 1:218-226.



Project Location

FIGURE 1

Regional Location

RECON

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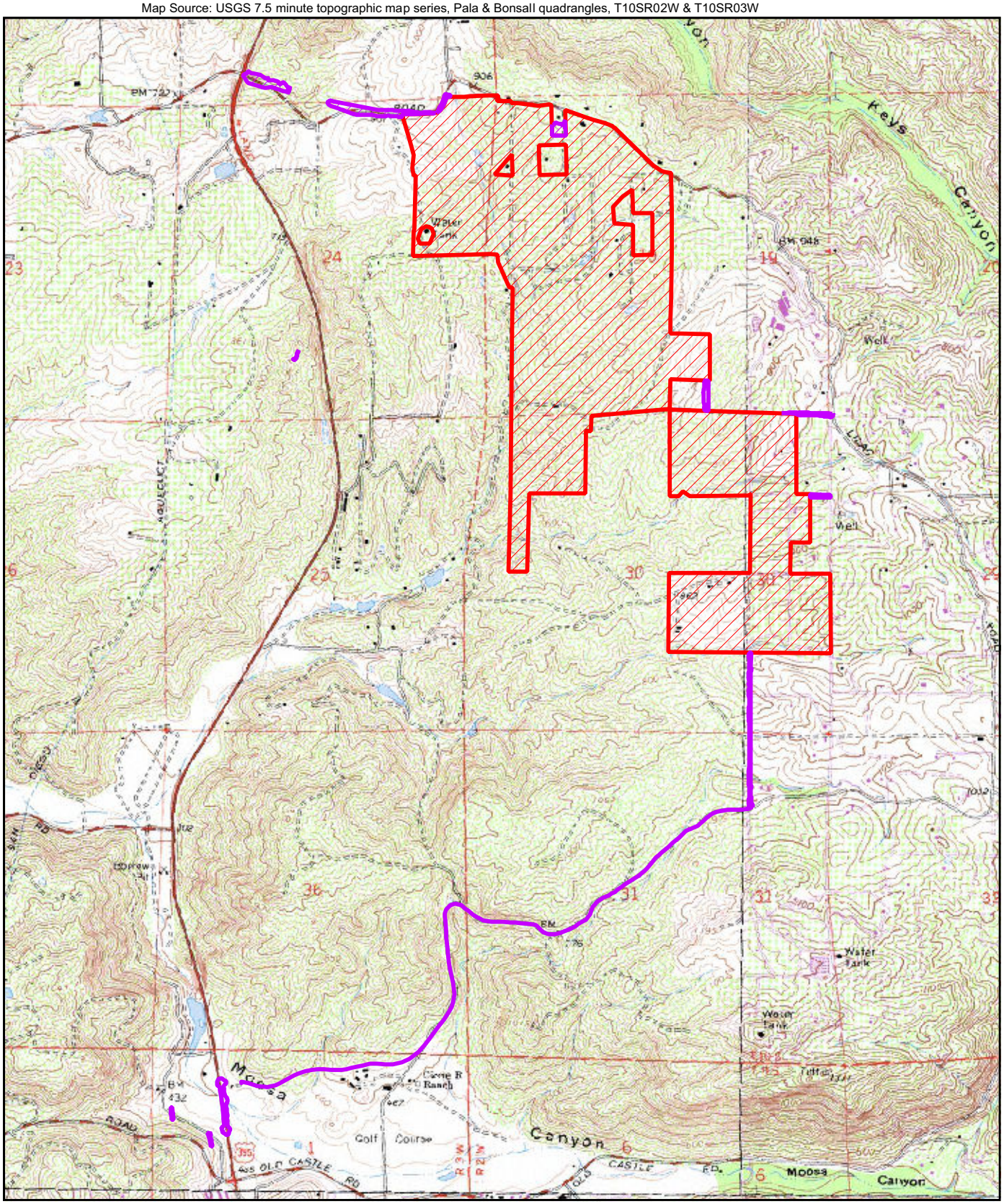
Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



Project Boundary

Off-site Improvement Areas

RECON

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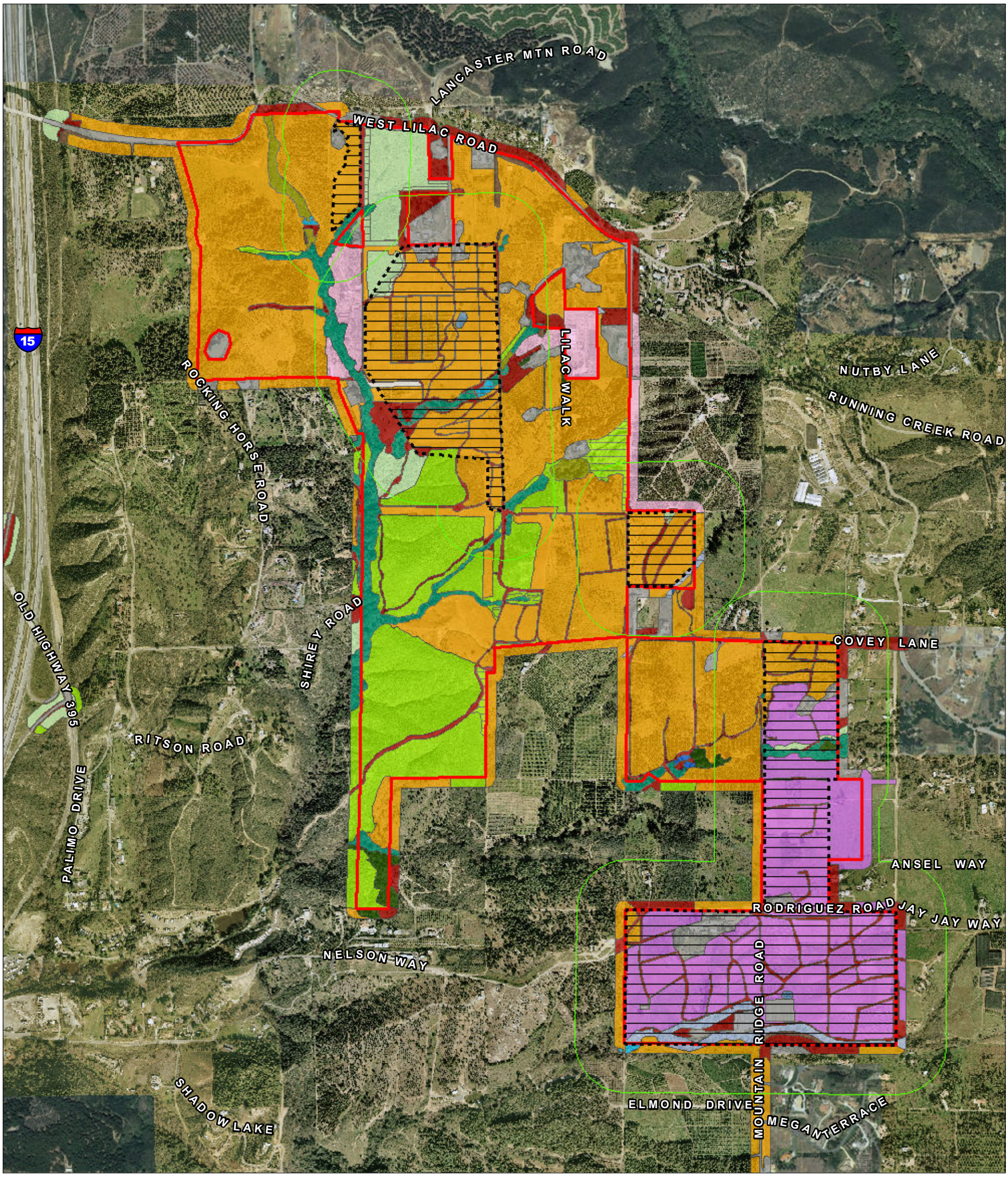
FIGURE 2

Project Location on USGS Map

Image source: Aerial Photography flown February 2011



- Project Boundary
- Burrowing Owl Habitat Assessment Survey Area
- 500-ft. Survey Buffer

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 Coastal/Valley Freshwater Marsh (52410)
- Disturbed Wetland (11200)
- Eucalyptus Woodland (79100)
- Mule Fat Scrub (63310)
- 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 Sycamore Riparian Woodland (62400)
- Southern Willow Riparian Woodland (62500)
- Southern Willow Scrub (63320)
- Disturbed Southern Willow Scrub (63320)
- Open Water - Fresh Water Agriculture Pond (64140)
- Extensive Agriculture - Row Crops (18320)
- Intensive Agriculture - Nursery (18200)
- Orchard (18100)
- Vinyard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

FIGURE 3

Vegetation Communities, Land Cover Types, and Burrowing Owl Habitat Assessment Survey Locations

RECON

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ATTACHMENT 5

Stephens' Kangaroo Rat Habitat Assessment Report

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1927 Fifth Avenue
San Diego, CA 92101
P 619.308.9333
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2033 East Grant Road
Tucson, AZ 85719
P 520.325.9977
F 520.293.3051

2027 Preisker Lane, Ste. G
Santa Maria, CA 93454
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www.reconenvironmental.com

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An Employee-Owned Company

August 14, 2012

Mr. Jon Rilling
Accretive Group of Companies
12275 El Camino Real, Ste. 110
San Diego, CA 92130

Reference: I-15/395 Master Planned Community MPA – Stephens' Kangaroo Rat Habitat Assessment (RECON Number 6153)

Dear Mr. Rilling:

This letter presents the results of an assessment conducted to determine the potential for suitable habitat areas within the I-15/395 Master Planned Community Major Pre-Application site (project area) to support the federally listed endangered Stephens' kangaroo rat (*Dipodomys stephensi*). No Stephens' kangaroo rat individuals were observed during this habitat assessment or during other general biology surveys conducted in the project area in 2011 / 2012 (RECON 2012). No suitable habitat or other sign were observed in the survey area that indicates that Stephens' kangaroo rats are using the site.

Site Description

The project area is located in northern San Diego County just east of Mount Ararat and Interstate 15 and north of Moosa Canyon (Figure 1). It occurs to the south and west of Lilac Road with Keys Canyon to the north, Valley Center to the east, Moosa Canyon to the south, and Interstate 15 and Bonsall to the west (Figure 2). Of the approximately 608-acre project area, about 218.27 acres were considered to have at least some of the general habitat characteristics needed to support Stephens' kangaroo rat (Figure 3).

The 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 above mean seal level at the highest to 750 feet above mean sea level at the lowest.

Vegetation communities and habitat types that are found in the project survey area occur as a mosaic of native habitat patches and agricultural areas (i.e., row crops, orchards, vineyards, nursery). 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 16 primary habitat types and vegetation communities were identified in the project survey area (see Figure 3). Some areas of these habitat types/vegetation communities have portions that were characterized as disturbed.

Assessment of Habitat Suitability for Stephens' Kangaroo Rat

In general, Stephens' kangaroo rat prefers grassland communities dominated by forbs, rather than by annual grasses, with substantial patches of open ground (USFWS 2011). Areas within the project site that have row-crops, open orchards, or non-native grassland vegetation were considered areas that could potentially support Stephens' kangaroo rat, as these areas were generally more open and were dominated by herbaceous vegetation (see Figure 3). These formed the habitat assessment survey area.

The survey areas were walked to determine the suitability of the habitats to support Stephens' kangaroo rat (Table 1). Evidence of the presence of burrows, burrow complexes, or other sign of kangaroo rat use (e.g., tracks, tail drag marks, scat, etc.) were looked for in each area. No suitable burrows or burrow complexes were observed within the agricultural fields and open orchards. A few burrows that were observed were created by small rodents, but no sign of kangaroo rat use was observed.

TABLE 1
STEPHENS' KANGAROO RAT HABITAT ASSESSMENT SURVEY INFORMATION

Survey Date	Type of Survey	Time	Biologist Conducting Survey*
February 14, 2011	General biology Surveys; SKR Habitat Assessment	8:00 A.M. – 3:00 P.M.	AIB, EJM
February 25, 2011	General biology Surveys; SKR Habitat Assessment	8:00 A.M. – 3:00 P.M.	GAS, AIB, EJM
July 7, 2011	SKR Habitat Assessment	1:00 P.M. – 5:00 P.M.	GAS, APF
January 11, 2012	SKR Habitat Assessment	8:00 A.M. – 4:00 P.M.	GAS
February 14, 2012	SKR Habitat Assessment	8:00 A.M. – 4:00 P.M.	GAS
March 21, 2012	SKR Habitat Assessment	8:00 A.M. – 4:00 P.M.	GAS

*AIB = Anna Bennett, EJM = Erin McKinney; GAS = Gerry Scheid; APF = Alex Fromer

The lack of suitable burrows, burrow complexes, or other sign in areas considered most suitable for Stephens' kangaroo rat in the project area is likely the result of human activity. Agricultural fields and the younger, more open orchards are tilled on a regular basis for crop production and vegetation control, resulting in an environment that is frequently disturbed. In addition, pest control in and around the agricultural fields and orchards likely have reduced the populations of small mammals in the area. Non-native grassland vegetation both on-site and off-site adjacent to the project area is comprised of mainly annual grasses and is too dense to be preferred by Stephens' kangaroo rat.

A search of the California Natural Diversity Data Base (State of California 2007) for documented Stephens' kangaroo rat occurrences confirmed that this species has been documented primarily in the following areas of San Diego County: Ramona, Warner Springs, near the mission San Luis Rey, and Camp Pendleton. A historical occurrence of Stephens' kangaroo rat from 1988 in Bonsall is considered extirpated. This information indicates that there is a low potential for there to be existing Stephens' kangaroo rat populations in the vicinity of the project area to serve as a source of immigration. While the project area lies within the historic range of this species, open habitats on the site are too disturbed from agricultural activities to likely support Stephens' kangaroo rat. Therefore, the likelihood of Stephens' kangaroo rat to be present in the project area is low based

on the condition of the potentially suitable habitats on-site, lack of burrows/burrow complexes and other sign of kangaroo rat usage, and lack of nearby known populations of this species.

If you have any questions regarding this habitat assessment, please contact me.

Sincerely,

Gerry Scheid
Senior Biologist

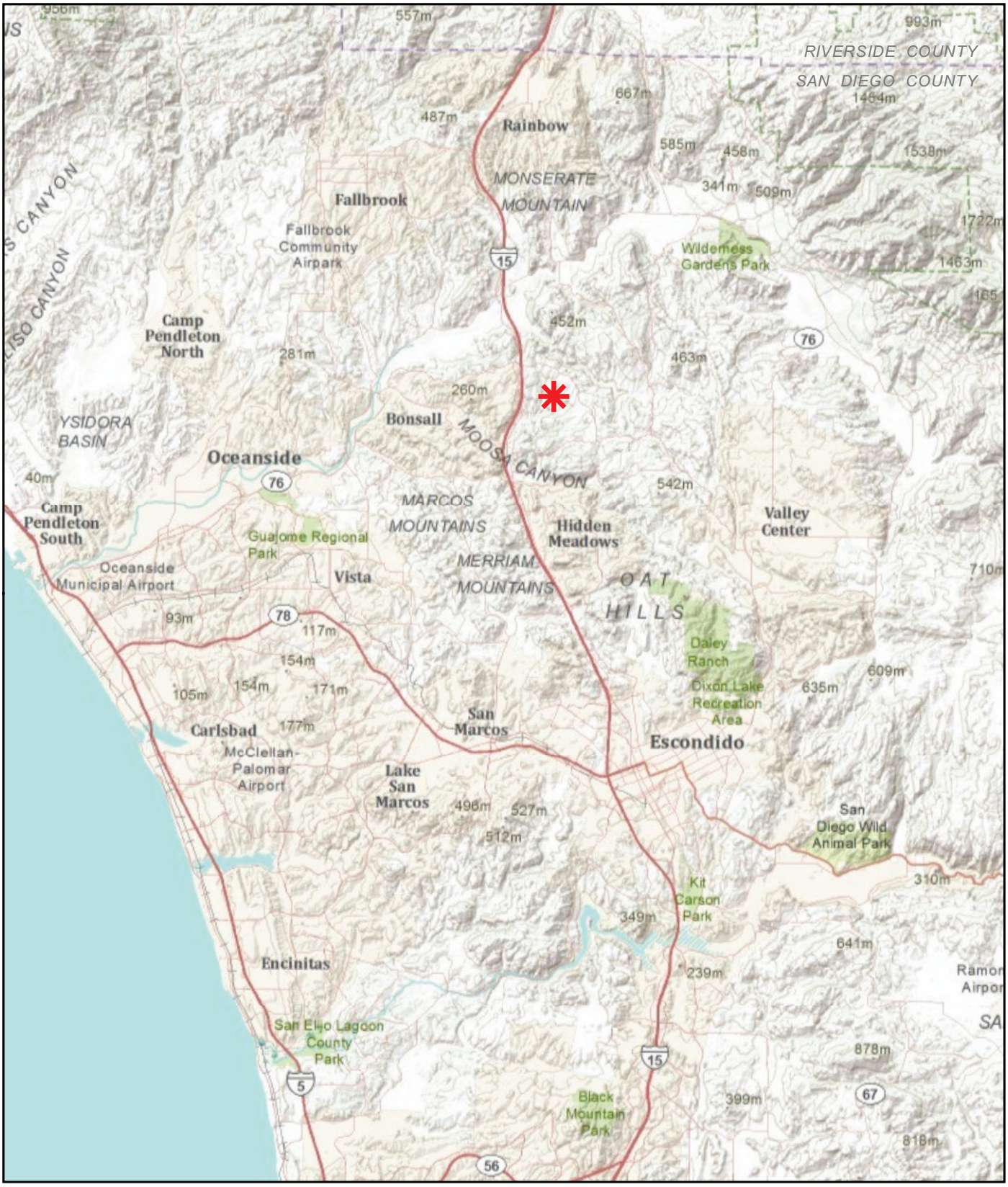
GAS:sjg:sh

cc: Rikki Schroeder, RMA Consultants

References Cited

California, State of
2007 California Natural Diversity Database: Electronic Database with Annual Updates. Wildlife & Habitat Data Analysis Branch, Department of Fish and Game.

U.S. Fish and Wildlife Service (USFWS)
2010 Endangered and Threatened Wildlife and Plants; 12-Month Finding on a petition To Remove the Stephens' Kangaroo Rat from the Federal List of Endangered and Threatened Wildlife. Federal Register 75:160:51204-51223. August 19.



Project Location

FIGURE 1

Regional Location

RECON

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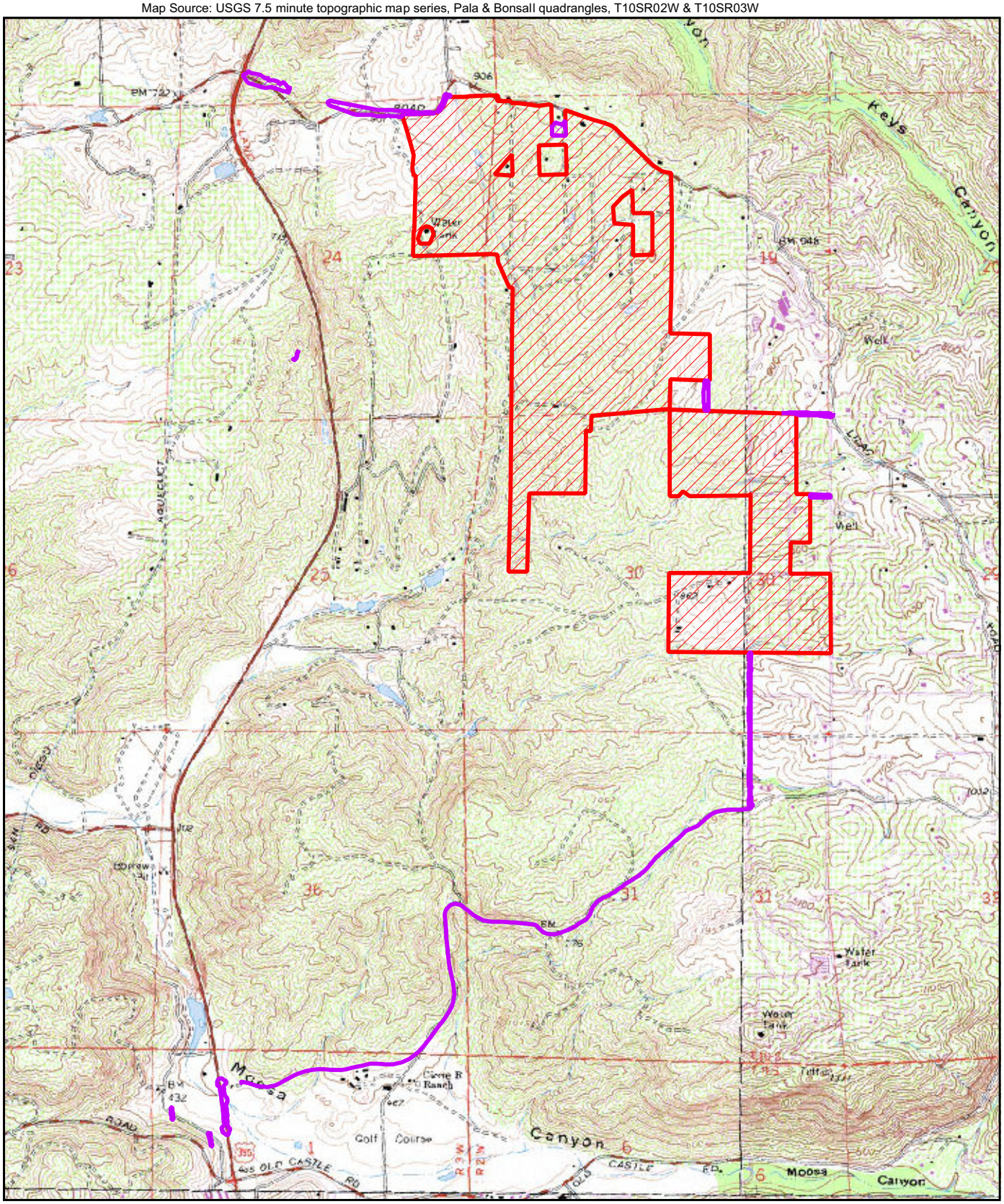
Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



Project Boundary

Off-site Improvement Areas

RECON

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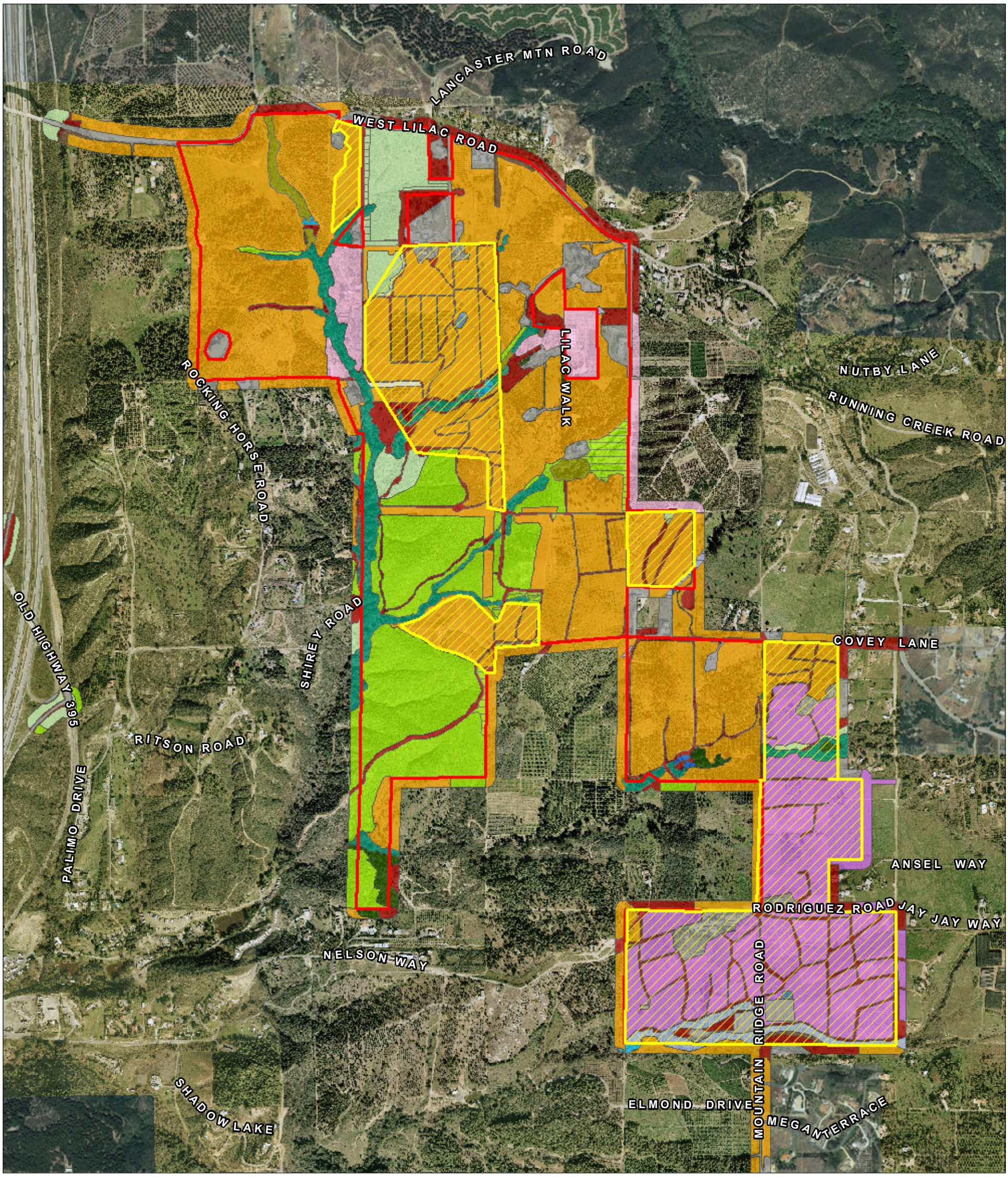
FIGURE 2

Project Location on USGS Map

Image source: Aerial Photography flown February 2011



- Project Boundary
- Stephens' Kangaroo Rat Habitat Assessment Survey Locations

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 Coastal/Valley Freshwater Marsh (52410)
- Disturbed Wetland (11200)
- Eucalyptus Woodland (79100)
- Mule Fat Scrub (63310)
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- Open Water - Fresh Water Agriculture Pond (64140)
- Extensive Agriculture - Row Crops (18320)
- Intensive Agriculture - Nursery (18200)
- Orchard (18100)
- Vinyard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

FIGURE 3

Vegetation Communities, Land Cover Types, and
Stephens' Kangaroo Rat Habitat Assessment Survey Locations

RECON

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ATTACHMENT 6

Arroyo Toad Habitat Assessment Report

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1927 Fifth Avenue
San Diego, CA 92101
P 619.308.9333
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2033 East Grant Road
Tucson, AZ 85719
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2027 Preisker Lane, Ste. G
Santa Maria, CA 93454
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F 619.308.9334

www.reconenvironmental.com

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An Employee-Owned Company

August 14, 2012

Mr. Jon Rilling
Accretive Group of Companies
12275 El Camino Real, Ste. 110
San Diego, CA 92130

Reference: I-15/395 Master Planned Community MPA – Arroyo Toad Habitat Assessment
(RECON Number 6153)

Dear Mr. Rilling:

This letter presents the results of a habitat assessment conducted to determine the potential for suitable habitat areas within the I-15/395 Master Planned Community Major Pre-application site (project area) to support the federally listed endangered arroyo toad (*Anaxyrus californicus*). No arroyo toad individuals were observed or detected during this habitat assessment or during other general biology surveys conducted in the project area in 2011/2012 (RECON 2012). In general, the project area lacks the breeding habitat characteristics preferred by the arroyo toad.

Site Description

The project area is located in northern San Diego County just east of Mount Ararat and Interstate 15 and north of Moosa Canyon (Figure 1). It occurs to the south and west of Lilac Road with Keys Canyon to the north, Valley Center to the east, Moosa Canyon to the south, and Interstate 15 and Bonsall to the west (Figure 2). Of the approximately 608-acre project area, about 32.4 acres of riparian habitat occurring along creeks with intermittent/perennial flows were assessed for the potential to support the arroyo toad (Figure 3).

The 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 above mean seal level at the highest to 750 feet above mean sea level at the lowest.

Vegetation communities and habitat types that are found in the project survey area occur as a mosaic of native habitat patches and agricultural areas (i.e., row crops, orchards, vineyards, and nursery). 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 16 primary habitat types and vegetation communities were identified in the project survey area (see Figure 3). Some areas of these habitat types/vegetation communities have portions that were characterized as disturbed.

Assessment of Habitat Suitability for Arroyo Toad

In general, arroyo toads prefer rivers or streams that have shallow, gravelly pools adjacent to sandy terraces (USFWS 1994). Optimal breeding habitat for this toad species is along low gradient segments of slow-moving streams with shallow pools, nearby sandbars, and adjacent stream terraces with open sand or gravel (USFWS 2009). While the riparian habitat associated with the streams preferred by arroyo toads may be composed of willows, cottonwoods, or oak woodland, the breeding areas usually have less than 10 percent vegetation cover. Adult toads avoid breeding in deep or swift water, sites with tree canopy cover, or that have steeply incised banks (USFWS 2009). Pools used for breeding rarely have a closed tree canopy over the lower banks, and heavily shaded pools are unsuitable for larval and juvenile toads (USFWS 2011). The riparian vegetation structure for juvenile and adult foraging is generally characterized by an open sandy terrace adjacent to denser tree/shrub vegetation with little to no grass or herbaceous cover at the ground level. Adult toads may disperse to adjacent upland habitats during the non-breeding season. These upland habitats may include alluvial scrub, oak woodlands, and coastal sage scrub (USFWS 2009, 2011).

Areas within the project site that have riparian vegetation along intermittent/perennial stream courses were assessed for the potential to support arroyo toad (see Figure 3; Table 1). Riparian habitats in the project area are confined to the narrow drainage courses. These habitats are composed of southern willow scrub, southern riparian scrub, and southern coast live oak riparian forest. The riparian areas were assessed to determine if they contained the vegetation composition, structure, and other habitat characteristics (i.e., open sandy terraces, shallow breeding pools, etc.) preferred by the arroyo toad.

The southern coast live oak riparian woodlands, southern riparian scrub, and southern willow scrub areas in the project area were not considered suitable habitat for breeding by the arroyo toad due to the lack of sufficient sandy substrates, open sandbars/terraces, and breeding pools that were not underneath a dense vegetation cover. These riparian woodlands and scrubs have a dense tree canopy and understory vegetation not preferred by this toad species. No significant areas of open pools were observed, most being beneath a dense tree canopy cover. The drainage courses on-site are relatively narrow, lack sandbars and open sandy terraces, and most have steeply incised banks under a dense vegetation cover. All these factors indicate that preferred breeding habitat for the arroyo toad is lacking in the project area.

TABLE 1
ARROYO TOAD HABITAT ASSESSMENT SURVEY INFORMATION

Survey Date	Type of Survey	Time	Biologist Conducting Survey*
June 16, 2011	General Biology Surveys; Arroyo Toad Habitat Assessment	8:00 A.M. – 5:00 P.M.	GAS, AIB, EJM
July 7, 2011	Arroyo Toad Habitat Assessment	1:00 P.M. – 5:00 P.M.	GAS, APF
January 11, 2012	Arroyo Toad Habitat Assessment	8:00 A.M. – 4:00 P.M.	GAS
February 14, 2012	Arroyo Toad Habitat Assessment	8:00 A.M. – 4:00 P.M.	GAS
March 21, 2012	Arroyo Toad Habitat Assessment	8:00 A.M. – 4:00 P.M.	GAS

*AIB = Anna Bennett, EJM = Erin McKinney; GAS = Gerry Scheid; APF = Alex Fromer

A search of the California Natural Diversity Data Base (State of California 2011) for documented arroyo toad occurrences confirmed that this species has been documented in the following areas of San Diego County:

- Southern San Diego County: Upper Sweetwater Reservoir, Sweetwater River, and Peterson Creek
- Eastern San Diego County: Upper/Lower Cottonwood Creek, Potrero Creek, Kitchen Creek, Pine Valley Creek, Temescal Creek, and Scove Canyon
- Northeastern San Diego County: Aqua Calienta Creek, Santa Ysabel Creek, Witch Creek, and upper San Luis Rey River
- Northwestern San Diego County: San Mateo Creek, Santa Margarita River, and De Luz Creek
- Northern San Diego County (south of project area): Upper Guejito Creek, Santa Maria Creek
- Northern San Diego County (north of project area): San Luis River, Pala Creek, and Keys Creek

Documented occurrences of arroyo toad nearest to the project area are approximately 2.1 miles north, 3.2 to 5.3 miles northeast, and 3.7 miles to the northwest along the San Luis Rey River; and approximately 1.2 miles to the north of the project area on Keys Creek.

Critical habitat for arroyo toad has been designated along the San Luis Rey River and Keys Creek north of the project area. While the project area lies within the historic range of this toad species and is within one to five miles of occupied habitat along Keys Creek and the San Luis Rey River, there are no suitable breeding areas within the project site that contain the habitat characteristics required by this species for successful reproduction. The relatively narrow creeks that support intermittent/perennial flows on-site lack a sandy substrate and open sandy terraces preferred by the species. Observed pools of water lie beneath a dense tree canopy, have a dense understory of herbaceous vegetation, and lack the preferred sandy/gravel substrates. In general, the creeks on-site occur on moderate gradients and have steep banks. All these factors reduce the suitability of the habitat for breeding by the arroyo toad. While a protocol survey for arroyo toad was not conducted in 2011, this species has a low probability to occur or breed on-site based on this habitat assessment.

If you have any questions regarding this habitat assessment, please contact me.

Sincerely,

Gerry Scheid
Senior Biologist

GAS:sjg

cc: Rikki Schroeder, RMA Consultants

References Cited

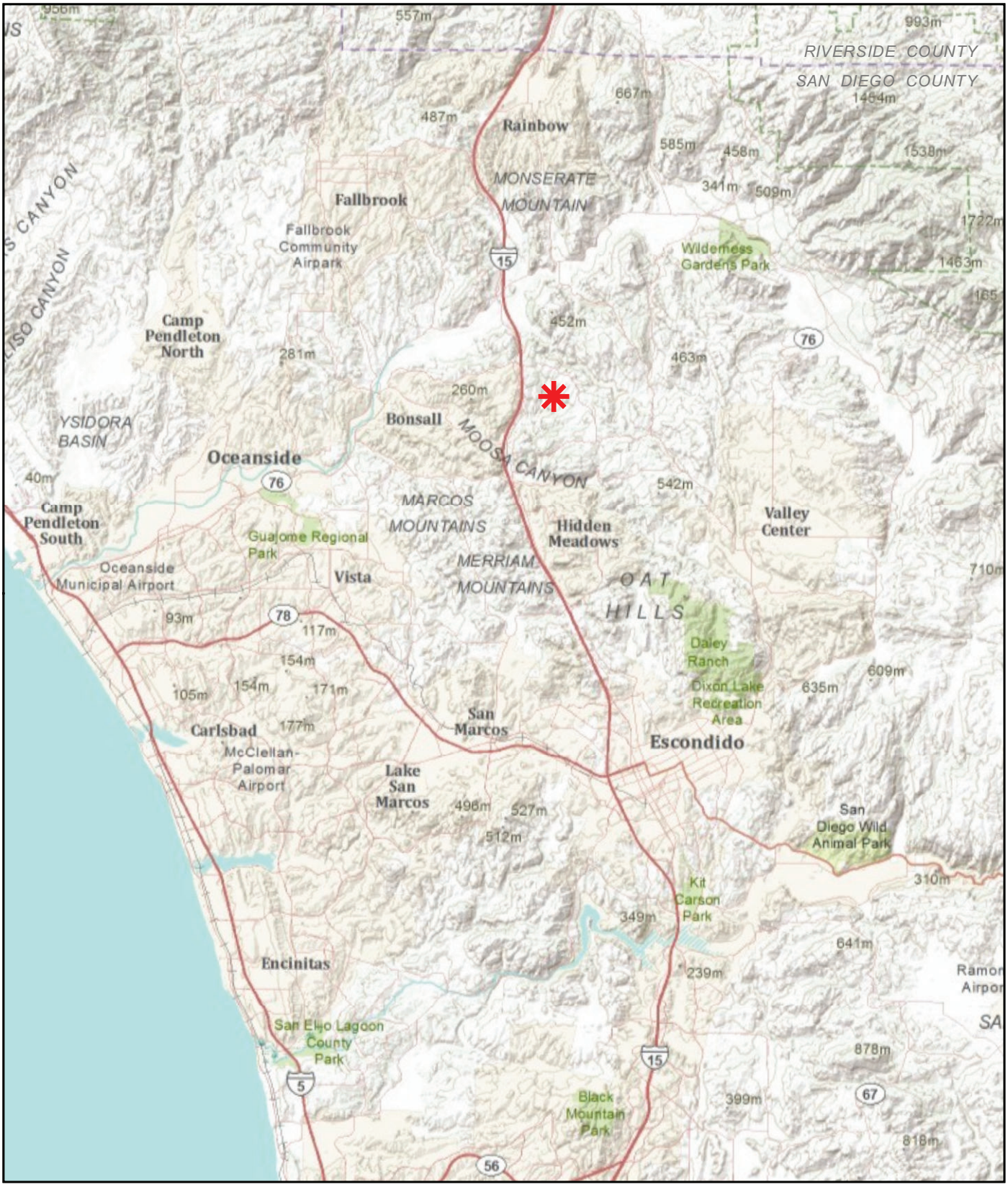
California, State of
2011 California Natural Diversity Database: Electronic Database with Annual Updates. Wildlife & Habitat Data Analysis Branch, Department of Fish and Game.

U.S. Fish and Wildlife Service (USFWS)
1994 Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Arroyo Southwestern Toad. Federal Register 59:241:64859-64866.

2009 Endangered and Threatened Wildfire and Plants; Revised Critical Habitat for the Arroyo Toad (*Anaxyrus californicus*). Federal Register 74:196:52612-52664.

2011 Endangered and Threatened Wildfire and Plants; Revised Critical Habitat for the Arroyo Toad. Federal Register 76:27:7246-7467.

RECON Environmental, Inc.
2012 Biological Resource Report for the I-15/395 Master Planned Community MAP (Case # 3992-10-025).



Project Location

FIGURE 1

Regional Location

RECON

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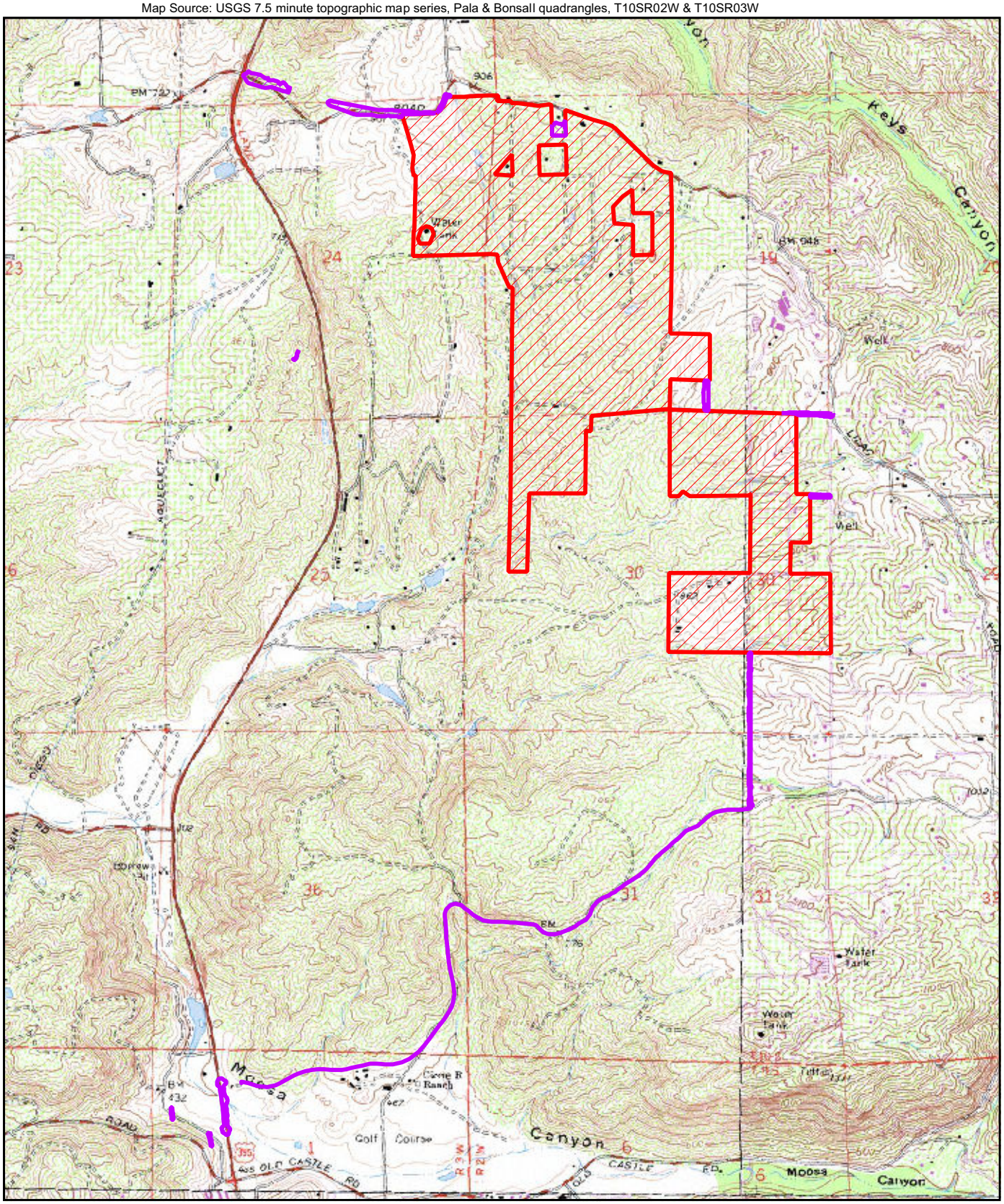
Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



Project Boundary

Off-site Improvement Areas

RECON

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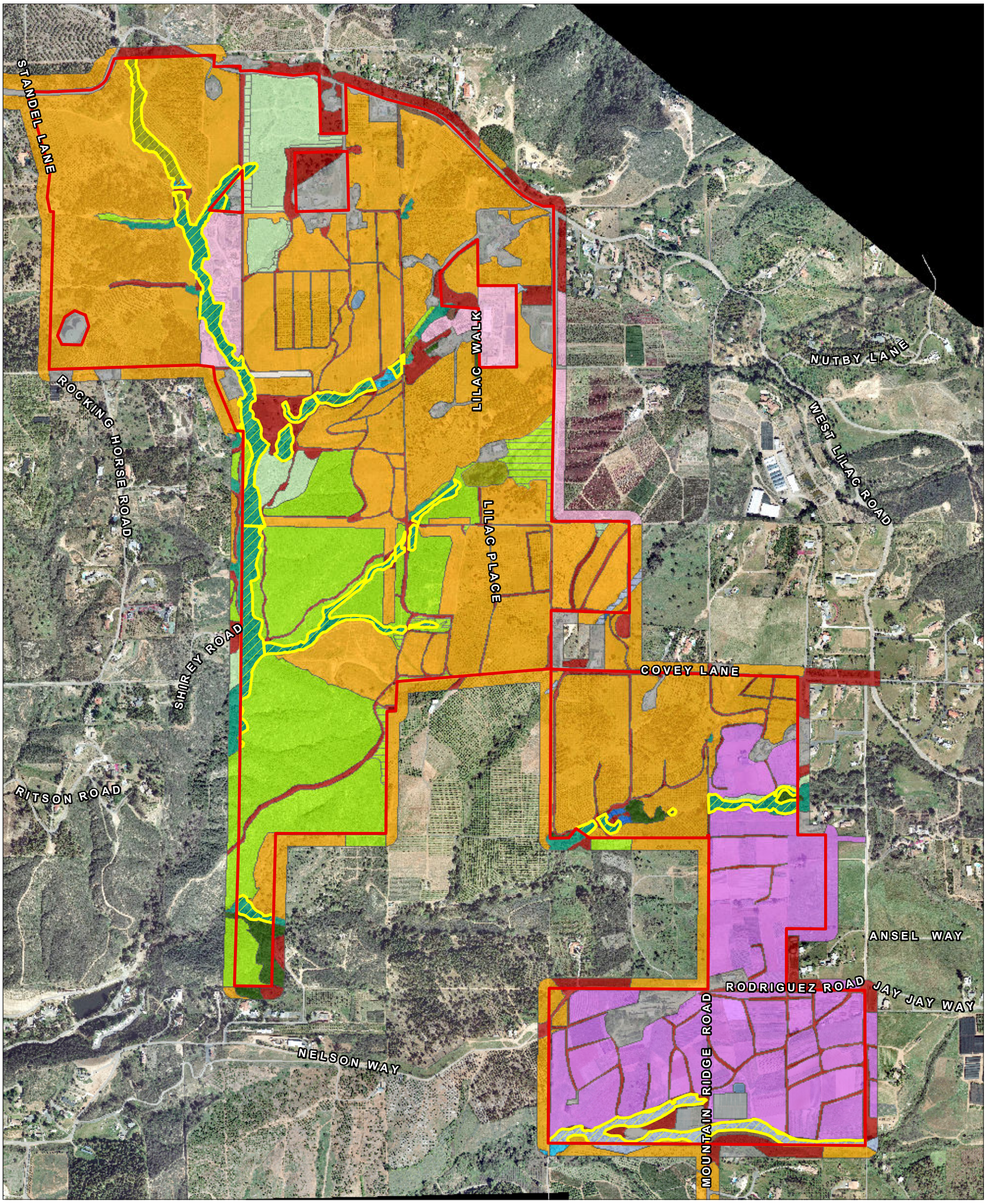
FIGURE 2

Project Location on USGS Map



Project Boundary

Arroyo Toad Habitat Assessment 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 Coastal/Valley Freshwater Marsh (52410)
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- Orchard (18100)
- Vinyard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

0 Feet 800

FIGURE 3

Vegetation Communities, Land Cover Types, and Arroyo Toad Habitat Assessment Areas

RECON

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ATTACHMENT 7

Plant Species Observed on Lilac Hills Ranch

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ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH

Scientific Name	Common Name	Habitat	Origin
	LYCOPODS		
SELAGINELLACEAE	**SPIKE-MOSS FAMILY**		
Selaginella bigelovii L. Underw.	Bigelow spike-moss	CSS, MC	N
	GYMNOSPERMS		
PINACEAE	**PINE FAMILY**		
Pinus sp.	pine	OW, H	I
	ANGIOSPERMS: MAGNOLIIDS-PIPERALES		
SAURURACEAE	**LIZARD'S TAIL FAMILY**		
Anemopsis californica (Nutt.) Hook. & Arn.	yerba mansa	RW, M	N
	ANGIOSPERMS: MONOCOTS		
AGAVACEAE	**AGAVE FAMILY**		
Agave americana L.	century plant	H	I
Chlorogalum parviflorum S. Watson	smallflower soap plant	CSS, MC	N
Yucca schidigera Ortgies	Mohave yucca	MC	N
Yucca whipplei Torr.	our Lord's candle	MC	N
ARACEAE	**ARUM FAMILY**		
Lemna minor L.	common duckweed	RW, FM. M	N
ARECACEAE	**PALM FAMILY**		
Phoenix dactylifera L.	date palm	RW, OW, H	I
Washingtonia robusta H. Wendl.	Washington fan palm	RW, OW, H	I
ASPHODELACEAE	**ASPHODEL FAMILY**		
Asphodelus fistulosus L.	Hollow-stem asphodel	AG, O	I
CYPERACEAE	**SEDGE FAMILY**		
Carex spissa L.H. Bailey	San Diego sedge	RW, M	N
Cyperus eragrostis Lam.	tall flatsedge	RW, M	N
Cyperus esculentus L.	nut-grass, chufa	RW, M	N
Schoenoplectus [=*Scirpus*] *americanus* (Pers.) Volkart ex Schinz & R. Keller	three-square	FM, RW, M	N
JUNCACEAE	**RUSH FAMILY**		
Juncus acutus L. ssp. *leopoldii* (Parl.) Snogerup	spiny rush	RW, M	N

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Habitat	Origin
Juncus dubius Engelm.	Mariposa rush	RW, M	N
Juncus mexicanus Willd. [=*Juncus arcticus* var. *mexicanus*]	Mexican rush	RW, M	N
Juncus xiphioides E. Meyer	sword-leaved rush	RW, M	N
LILIACEAE	**LILY FAMILY**		
Calochortus splendens Benth.	lilac mariposa	MC	N
Calochortus weedii A.W. Wood var. *weedii*	weed mariposa	MC	N
POACEAE (GRAMINEAE)	**GRASS FAMILY**		
Arundo donax L.	giant reed	RW	I
Avena barbata Link	slender wild oat	NNG, AG, O	I
Bromus carinatus Hook. & Arn.	California brome	NNG, AG, O	N
Bromus diandrus Roth	ripgut grass	NNG, AG, O	I
Bromus hordeaceus L.	soft chess	NNG, O	I
Bromus madritensis L. ssp. *rubens* (L.) Husnot	red brome	NNG, AG, O	I
Cortaderia selloana (Schult. & Schult. f.) Asch. & Graebn.	pampas grass	RW, OW	I
Cynodon dactylon (L.) Pers.	Bermuda grass	AG, O, H	I
Digitaria sanguinalis (L.) Scop.	crabgrass	AG, O	I
Echinochloa crus-galli (L.) P. Beauv.	barnyard grass	NNG, MC, RW	I
Gastridium ventricosum (Gouan) Schinz & Thell.	nit grass	MC	I
Hordeum murinum L.	wild barley	NNG, AG, O	I
Lamarckia aurea (L.) Moench	goldentop	AG, O	I
Leptochloa uninervia (J. Presl) Hitchc. & Chase	Mexican sprangletop	RW	N
Leymus condensatus (C. Presl) Á. Löve	giant rye grass	RW	N
Lolium perenne L.	perennial ryegrass	NNG, AG, O	I
Melica imperfecta Trin.	California melic	MC, RW	N
Muhlenbergia rigens (Benth.) Hitchc.	deergrass	RW	N
Nassella cernua (Stebbins & Love) Barkworth	nodding needlegrass	CSS, MC	N
Nassella lepida (Hitchc.) Barkworth	foothill needlegrass	CSS, MC	N
Nassella pulchra (Hitchc.) Barkworth	purple needlegrass	CSS, MC	N
Paspalum dilatatum Poir.	dallis grass	AG, O	I
Pennisetum setaceum (Forssk.) Chiov.	fountain grass	RW, OW	I
Poa pratensis L. ssp. *pratensis*	Kentucky bluegrass	O, H	I
Poa secunda J. Presl ssp. *secunda*	one-sided bluegrass	MC	N
Polypogon monspeliensis (L.) Desf.	annual beard grass	RW, M	I
Vulpia myuros (L.) C.C. Gmel var. *myuros*	rattail fescue	NNG, O, AG	I

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Habitat	Origin
THEMIDACEAE	**BRODIAEA FAMILY**		
Dichelostemma capitatum (Benth.) A.W. Wood	blue dicks	CSS, MC	N
TYPHACEAE	**CATTAIL FAMILY**		
Typha latifolia L.	broad-leaved cattail	FM, M	N
	ANGIOSPERMS: DICOTS		
ADOXACEAE	**ADOXA FAMILY**		
Sambucus nigra [=*mexicana*] L. ssp. *caerulea* (Raf.) Bolli	blue elderberry	RW	N
AIZOACEAE	**FIG-MARIGOLD FAMILY**		
Carpobrotus chilensis (Molina) N.E. Br.	sea fig	RW, O, H	I
Carpobrotus edulis (L.) N.E. Br.	hottentot fig	RW, O , H	I
Mesembryanthemum crystallinum L.	crystalline ice plant	O, H	I
Mesembryanthemum nodiflorum L.	slender-leaved ice plant	O, H	I
AMARANTHACEAE	**AMARANTH FAMILY**		
Amaranthus albus L.	tumbleweed	AG, O	I
Amaranthus californicus (Moq.) S. Watson	California amaranth	RW, MC	N
ANACARDIACEAE	**SUMAC OR CASHEW FAMILY**		
Malosma laurina Nutt. ex Abrams	laurel sumac	CSS, MC	N
Rhus ovata S. Watson	sugar bush	CSS, MC, RW	N
Schinus molle L.	Peruvian pepper tree	AG, O, H	I
Schinus terebinthifolius Raddi	Brazilian pepper tree	AG, O, H	I
Toxicodendron diversilobum (Torr. & A. Gray) Greene	western poison oak	RW, OW	N
APIACEAE (UMBELLIFERAE)	**CARROT FAMILY**		
Apiastrum angustifolium Nutt.	wild-celery	RW	N
Apium graveolens L.	celery	RW	I
Conium maculatum L.	poison hemlock	RW, M	I
Daucus pusillus Michx.	rattlesnake weed	MC	N
Foeniculum vulgare Mill.	fennel	AG, O	I
Lomatium dasycarpum (Torr. & A. Gray) J.M. Coult. & Rose ssp. *dasycarpum*	lace parsnip	MC	N
Sanicula arguta J.M. Coult. & Rose	little-jim sanicle	MC	N
APOCYNACEAE	**DOGBANE FAMILY**		
Nerium oleander L.	oleander	AG, H	I

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Habitat	Origin
ASTERACEAE	**SUNFLOWER FAMILY**		
Acourtia microcephala DC.	purple-head, sacapellote	RW, MC	N
Ambrosia psilostachya DC.	western ragweed	RW, M	N
Artemisia californica Less.	California sagebrush	CSS, MC	N
Artemisia douglasiana Besser	mugwort	RW	N
Baccharis emoryi A. Gray	chaparral broom	RW	N
Baccharis pilularis DC.	coyote brush	OW, MC, CSS	N
Baccharis salicifolia (Ruiz & Pav.) Pers.	mule fat, seep-willow	RW	N
Baccharis sarothroides A. Gray	broom baccharis	MC, O	N
Brickellia californica (Torr. & A. Gray) A. Gray	California brickellbush	MC	N
Carduus pycnocephalus L.	Italian thistle	CSS, MC, AG, O, RW	I
Centaurea melitensis L.	tecalote, star-thistle	NNG, AG, O	I
Chaenactis artemisiifolia (Harv. & A. Gray) A. Gray	white pincushion	MC	N
Chaenactis glabriuscula DC.	yellow pincushion	MC	N
Cirsium occidentale (Nutt.) Jeps. var. *occidentale*	cobwebby thistle	RW	N
Cirsium vulgare (Savi) Ten.	bull thistle	RW, O	I
Conyza bonariensis (L.) Cronquist	flax-leaf fleabane	RW, AG, O	I
Conyza canadensis (L.) Cronquist	horseweed	RW, AG, O	N
Corethrogyne filaginifolia [= all previously known *Lessingia filaginifolia* varieties in California] (Hook. & Arn.) Nutt.	California-aster	MC	N
Cynara scolymus L.	artichoke	AG, O, H	I
Deinandra [=*Hemizonia*] *fasciculata* (DC.) Greene	golden tarplant	CSS, MC	N
Dimorphotheca pluvialis (L.) Moench	African daisy	AG, O, H	I
Encelia farinosa A. Gray ex Torr.	brittlebush, incienso	MC	N
Eriophyllum confertiflorum (DC.) A. Gray var. *confertiflorum*	golden-yarrow	MC, CSS	N
Gazania linearis (Thunb.) Druce	treasure flower	AG, H	I
Gnaphalium californicum DC.	green everlasting	MC	N
Gnaphalium luteoalbum L.	everlasting	MC	I
Gnaphalium stramineum Kunth	cotton-batting plant	MC	N
Hazardia squarrosa (Hook. & Arn.) Greene	saw-toothed goldenbush	MC	N
Helminthotheca [=*Picris*] *echioides* (L.) Holub	bristly ox-tongue	RW, M	I
Heterotheca grandiflora Nutt.	telegraph weed	NNG, O	N
Holocarpha virgata (A. Gray) D.D. Keck ssp. *elongata* D.D. Keck	graceful tarplant	MC	N
Hypochaeris glabra L.	smooth cat's-ear	CSS, MC, O	I

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Habitat	Origin
Isocoma menziesii (Hook. & Arn.) G.L. Nesom	coast goldenbush	MC	N
Lactuca serriola L.	prickly lettuce	RW, M	I
Logfia filaginoides [=*Filago californica*] (Hook. & Arn.) Morefield	California herba impia, fluffweed	CSS, MC, O	N
Osmadenia tenella Nutt.	osmadenia	MC, CSS	N
Pluchea odorata (L.) Cass.	salt marsh fleabane	RW, M	N
Pseudognaphalium beneolens [=*Gnaphalium canescens* ssp. *beneolens*] (Davidson) Anderb.	fragrant everlasting	MC	N
Pseudognaphalium canescens [=*Gnaphalium canescens* ssp. *canescens*] (DC.) Anderb.	everlasting cudweed	MC	N
Pseudognaphalium microcephalum [=*Gnaphalium canescens* ssp. *microcephalum*] (Nutt.) Anderb.	white everlasting	MC	N
Psilocarphus tenellus Nutt.	slender woolly marbles	MC	N
Senecio vulgaris L.	common groundsel	O, AG	I
Sonchus asper (L.) Hill ssp. *asper*	prickly sow thistle	RW, O	I
Sonchus oleraceus L.	common sow thistle	RW, O	I
Stephanomeria virgata Benth.	slender stephanomeria	MC	N
Stylocline gnaphaloides Nutt.	everlasting nest straw	MC	N
BORAGINACEAE	**BORAGE FAMILY**		
Cryptantha intermedia (A. Gray) Greene	nievitas cryptantha	CSS, MC	N
Cryptantha micromeres (A. Gray) Greene	minute-flower cryptantha	CSS, MC	N
Eucrypta chrysanthemifolia (Benth.) Greene	eucrypta	MC	N
Pectocarya linearis (Ruiz & Pav.) DC. ssp. *ferocula* (I.M. Johnst.) Thorne	comb-bur	MC	N
Phacelia distans Benth.	wild-heliotrope	CSS, MC	N
Phacelia grandiflora (Benth.) A. Gray	large-flowered phacelia	MC, RW	N
Phacelia parryi Torr.	Parry phacelia	MC	N
BRASSICACEAE (CRUCIFERAE)	**MUSTARD FAMILY**		
Brassica nigra (L.) W.D.J. Koch	black mustard	NNG, AG, O	I
Hirschfeldia incana (L.) Lagr.-Fossat	short-pod mustard	NNG, AG, O	I
Lepidium lasiocarpum Nutt. var. *lasiocarpum*	sand peppergrass	MC	N
Nasturtium officinale [=*Rorippa nasturtium-aquaticum*] R. Br.	water cress	RW, M	I
Raphanus sativus L.	radish	AG, O	I
Sisymbrium officinale L.	hedge mustard	AG, O	I
Sisymbrium orientale L.	mustard	AG, O	I

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Habitat	Origin
CACTACEAE	**CACTUS FAMILY**		
Opuntia ficus-indica (L.) Mill.	Indian fig	AG, MC, O	I
Opuntia littoralis (Engelm.) Cockerell.	shore cactus	MC	N
CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**		
Lonicera subspicata Hook. & Arn.	southern honeysuckle	MC	N
CARYOPHYLLACEAE	**PINK FAMILY**		
Silene gallica L.	windmill pink	MC	I
Spergula arvensis L.	stickwort, starwort	MC, O	I
CHENOPODIACEAE	**GOOSEFOOT FAMILY**		
Atriplex semibaccata R. Br.	Australian saltbush	O	I
Chenopodium album L.	lamb's quarters, pigweed	AG, O	I
Chenopodium californicum (S. Watson) S. Watson	California pigweed	MC	N
Chenopodium murale L.	nettle-leaved goosefoot	AG, O	I
Dysphania [=*Chenopodium*] *ambrosioides* (L.) Mosyakin & Clemants	Mexican tea	AG, O	I
Salsola tragus L.	Russian thistle, tumbleweed	AG, O	I
CISTACEAE	**ROCK-ROSE FAMILY**		
Helianthemum scoparium Nutt.	peak rush-rose	MC	N
CONVOLVULACEAE	**MORNING-GLORY FAMILY**		
Calystegia macrostegia (Greene) Brummitt ssp. *intermedia* (Abrams) Brummitt	chaparral morning-glory	CSS, MC	N
Convolvulus arvensis L.	bindweed, orchard morning-glory	CSS, MC	I
Cuscuta californica Hook. & Arn.	dodder	CSS, MC	N
Ipomoea purpurea (L.) Roth.	common morning-glory	H	I
CRASSULACEAE	**STONECROP FAMILY**		
Dudleya pulverulenta (Nutt.) Britton & Rose	chalk lettuce, chalk dudleya	CSS, MC RW, OW	N
CUCURBITACEAE	**GOURD FAMILY**		
Marah macrocarpus (Greene) Greene	wild cucumber	CSS, MC	N
ERICACEAE	**HEATH FAMILY**		
Xylococcus bicolor Nutt.	mission manzanita	MC	N
EUPHORBIACEAE	**SPURGE FAMILY**		
Chamaesyce sp.	prostrate spurge	CSS, MC, O	N
Croton [=*Eremocarpus*] *setigerus* Hook.	dove weed	AG, O	N

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Habitat	Origin
Ricinus communis L.	castor bean	RW, M	I
FABACEAE (LEGUMINOSAE)	**LEGUME FAMILY**		
Acmispon glaber (Vogel) Brouillet [=*Lotus scoparius*]	deerweed	CSS, MC	N
Acmispon micranthus (Torr. & A. Gray) Brouillet [=*Lotus hamatus*]	grab lotus	MC	N
Lupinus bicolor Lindl.	miniature lupine	MC	N
Lupinus truncatus Nutt.	chaparral lupine	MC	N
Melilotus indicus (L.) All.	sourclover	AG, O, M	I
FAGACEAE	**OAK FAMILY**		
Quercus agrifolia Née	coast live oak, encina	RW, OW	N
Quercus berberidifolia Liebm.	scrub oak	RW	N
Quercus engelmannii Greene	Engelmann oak, mesa oak	RW, OW	N
GENTIANACEAE	**GENTIAN FAMILY**		
Zeltnera [=*Centaurium*] *venusta* (A. Gray) G. Mans.	canchalagua	MC	N
GERANIACEAE	**GERANIUM FAMILY**		
Erodium cicutarium (L.) L'Hér. ex Aiton	red stemmed filaree	AG, O	I
Pelargonium x *hortorum* L.H. Bailey	garden geranium	AG, H	I
LAMIACEAE	**MINT FAMILY**		
Marrubium vulgare L.	horehound	AG, O , MC	I
Salvia columbariae Benth.	chia	MC	N
Salvia mellifera Greene	black sage	CSS, MC	N
Stachys ajugoides Benth. var. *rigida* (Nutt. ex Benth.) Jeps. & Hoover	hedge nettle	RW, OW	N
LYTHRACEAE	**LOOSESTRIFE FAMILY**		
Lythrum hyssopifolia L.	grass poly, hyssop loosestrife	RW, M	I
MALVACEAE	**MALLOW FAMILY**		
Malacothamnus fasciculatus (Nutt. ex Torr. & A. Gray) Greene	chaparral mallow	MC	N
Malva parviflora L.	cheeseweed, little mallow	AG, O	I
Malvella leprosa (Ortega) Krapov.	alkali-mallow, white-weed	RW, M	N
MONTIACEAE	**MONTIA FAMILY**		
Calandrinia ciliata (Ruiz & Pav.) DC.	red maids	MC	N
Claytonia perfoliata Willd.	miner's lettuce	MC, CSS, RW, OW	N
MYRTACEAE	**MYRTLE FAMILY**		
Eucalyptus sp.	gum tree	AG, H	I

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Habitat	Origin
MYRSINACEAE			
Anagallis arvensis L.	scarlet pimpernel, poor-man's weatherglass	AG, O	I
NYCTAGINACEAE	**FOUR O'CLOCK FAMILY**		
Mirabilis laevis [=*californica*] (Benth.) Curran var. *crassifolia* (Choisy) Spellenb.	wishbone bush	MC	N
OLEACEAE	**OLIVE FAMILY**		
Olea europaea L.	olive	AG, O, H	I
ONAGRACEAE	**EVENING-PRIMROSE FAMILY**		
Camissonia bistorta (Torr. & A. Gray) P.H. Raven	California sun cup	MC	N
Clarkia purpurea (Curtis) A. Nelson & J.F. Macbr. ssp. *quadrivulnera* (Douglas ex Lindl.) H. Lewis & M. Lewis	four-spot	MC	N
Epilobium ciliatum Raf. ssp. *ciliatum*	sticky willowweed	RW, M	N
PAEONIACEAE	**PEONY FAMILY**		
Paeonia californica Nutt.	California peony	MC	N
PAPAVERACEAE	**POPPY FAMILY**		
Ehrendorferia [=*Dicentra*] *chrysantha* (Hook. & Arn.) Rylander	golden ear-drops	MC	N
Eschscholzia californica Cham.	California poppy	MC	N
PHRYMACEAE [=SCROPHULARIACEAE]	**HOPSEED FAMILY**		
Mimulus aurantiacus Curtis	low bush monkey-flower	MC, CSS	N
Mimulus guttatus DC.	common monkey-flower	RW, M	N
PLANTAGINACEAE	**PLANTAIN FAMILY**		
Antirrhinum nuttallianum Benth. ex A. DC.	Nuttall snapdragon	CSS, MC	N
Keckiella antirrhinoides (Benth.) Straw var. *antirrhinoides*	yellow bush penstemon	MC	N
Plantago erecta E. Morris	dot-seed plantain	CSS	N
Plantago major L.	common plantain	AG, O, H	I
PLATANACEAE	**PLANE TREE OR SYCAMORE FAMILY**		
Platanus racemosa Nutt.	western sycamore	RW	N
POLEMONIACEAE	**PHLOX FAMILY**		
Gilia sp.	gilia	MC	N
Navarretia hamata Greene	hooked navarretia	MC	N

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Habitat	Origin
POLYGONACEAE	**BUCKWHEAT FAMILY**		
Chorizanthe fimbriata Nutt.	fringed spineflower	MC	N
Chorizanthe procumbens Nutt.	prostrate spineflower	MC	N
Eriogonum fasciculatum Benth. var. *fasciculatum*	coast California buckwheat	CSS, MC	N
Persicaria [=*Polygonum*] *lapathifolium* (L.) Gray	willow weed	RW, M	N
Polygonum aviculare L. ssp. *depressum* [=*P. arenastrum*] (Meisn.) Arcangeli	common knotweed, doorweed	AG, O	I
Pterostegia drymarioides Fisch. & C.A. Mey.	California thread-stem	CSS, MC	N
Rumex crispus L.	curly dock	RW, M, AG	I
PORTULACACEAE	**PURSLANE FAMILY**		
Portulaca oleracea L.	purslane	AG, O	I
RANUNCULACEAE	**BUTTERCUP FAMILY**		
Clematis pauciflora Nutt.	ropevine	CSS, MC, RW	N
RESEDACEAE	**MIGNONETTE FAMILY**		
Reseda odorata L.	garden mignonette	RW	I
RHAMNACEAE	**BUCKTHORN FAMILY**		
Ceanothus crassifolius Torr.	hoaryleaf ceanothus	MC	N
Ceanothus oliganthus Nutt.	hairy ceanothus	MC	N
Ceanothus tomentosus Parry	coast blue lilac	MC	N
Rhamnus crocea Nutt.	spiny redberry	MC	N
ROSACEAE	**ROSE FAMILY**		
Adenostoma fasciculatum Hook. & Arn.	chamise	MC	N
Heteromeles arbutifolia (Lindl.) M. Roem.	toyon, Christmas berry	MC, RW	N
RUBIACEAE	**MADDER OR COFFEE FAMILY**		
Galium angustifolium A. Gray ssp. *angustifolium*	narrow-leaf bedstraw	MC, CSS	N
Galium aparine L.	goose grass, stickywilly	MC, CSS	N
Galium nuttallii A. Gray	San Diego bedstraw	MC	N
RUTACEAE	**RUE OR CITRUS FAMILY**		
Cneoridium dumosum (Nutt. ex Torr. & A. Gray) Baill.	bushrue	MC	N
SALICACEAE	**WILLOW FAMILY**		
Populus fremontii S. Watson ssp. *fremontii*	Fremont cottonwood, alamo	RW	N
Salix exigua Nutt.	narrow-leaved willow	RW	N

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Habitat	Origin
Salix gooddingii C.R. Ball.	Goodding's black willow	RW	N
Salix laevigata Bebb	red willow	RW	N
Salix lasiolepis Benth.	arroyo willow	RW	N
SCROPHULARIACEAE	**FIGWORT FAMILY**		
Cordylanthus rigidus (Benth.) Jeps. ssp. *setigerus* T.I. Chuang & Heckard	thread-leaved bird's-beak	MC	N
Scrophularia californica Cham. & Schltdl.	California figwort	MC	N
SOLANACEAE	**NIGHTSHADE FAMILY**		
Datura wrightii Regel	Jimson weed, thorn-apple, tolguacha	AG, O, MC	N
Nicotiana glauca Graham	tree tobacco	AG, O, RW	I
Solanum americanum Mill.	white nightshade	MC, AG, O	N
Solanum xanti [=*tenuilobatum*] A. Gray	chaparral nightshade	MC, AG, O	N
TAMARICACEAE	**TAMARISK FAMILY**		
Tamarix ramosissima Ledeb.	saltcedar	RW, M	I
URTICACEAE	**NETTLE FAMILY**		
Urtica urens L.	dwarf nettle	RW, M, AG, O	I
VERBENACEAE	**VERVAIN FAMILY**		
Verbena lasiostachys Link	western vervain	RW, M	N
VITACEAE	**GRAPE FAMILY**		
Vitis girdiana Munson	desert wild grape	RW, OW	N
Vitis vinifera L.	cultivated grape, wine grape	AG	I
ZYGOPHYLLACEAE	**CALTROP FAMILY**		
Tribulus terrestris L.	puncture vine	AG, O	I

SOURCES: Jepson Online Interchange <http://ucjeps.berkeley.edu/interchange.html> (2009); K.N. Brenzel (editor), *Sunset Western Garden Book* (Sunset Publishing, Menlo Park, CA, 2001); John P. Rebman and Michael G. Simpson, *Checklist of the Vascular Plants of San Diego County,* 4th ed. (San Diego Natural History Museum, San Diego, CA, 2006); Natural Resources Conservation Service Plants Database <http://plants.usda.gov/> (USDA 2008).

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

HABITATS

AG = Agriculture
CSS = Coastal sage scrub
FM = Freshwater marsh
H = Horticultural
M = Mesic areas and wetlands
MC = Southern mixed chaparral
NNG = Non-native grassland
O = Open places, waste places, roadsides, burns, etc.
OW = Oak woodland
RW = Riparian woodland

ORIGIN

N = Native to locality
I = Introduced species from outside locality

ATTACHMENT 7
PLANT SPECIES OBSERVED ON LILAC HILLS RANCH
(continued)

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ATTACHMENT 8

Wildlife Species Observed/Detected on Lilac Hills Ranch

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ATTACHMENT 8
WILDLIFE SPECIES OBSERVED/DETECTED ON LILAC HILLS RANCH

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
INVERTEBRATES (Nomenclature from Eriksen and Belk 1999; Milne and Milne 1980; Mattoni 1990; and Opler and Wright 1999)				
HESPERIIDAE	**SKIPPERS**			
Erynnis funeralis	funereal duskywing	RW	F	O
Pyrgus communis	common checkered skipper	CSS	C	O
PAPILIONIDAE	**PARNASSIANS & SWALLOWTAILS**			
Papilio rutulus	western tiger swallowtail	RW	F	O
PIERIDAE	**WHITES & SULPHURS**			
Anthocharis sara	Sara or Pacific orangetip	CSS, MC	F	O
Pontia protodice	common or checkered white	CSS, MC, O	C	O
Pieris rapae	cabbage white	CSS, MC, O	C	O
LYCAENIDAE	**BLUES, COPPERS, & HAIRSTREAKS**			
Callophrys augustinus iroides	brown elfin	MC	F	O
Glaucopsyche lygdamus australis	southern or silvery blue	CSS, MC	F	O
Icaricia acmon acmon	Acmon blue	CSS, MC	C	O
Strymon melinus pudica	common or gray hairstreak	MC	F	O
RIODINIDAE	**METALMARKS**			
Apodemia virgulti	Behr's metalmark	CSS, MC	C	O
NYMPHALIDAE	**BRUSH-FOOTED BUTTERFLIES**			
Limenitis lorquini lorquini	Lorquin's admiral	RW	F	O
Coenonympha tullia california	California or common ringlet	CSS, MC, O	C	O
Junonia coenia	common buckeye	CSS, MC	C	O
Nymphalis antiopa antiopa	mourning cloak	CSS, MC, RW	F	O
Vanessa annabella	west coast lady	CSS, MC	C	O
Vanessa atalanta rubria	red admiral	RW	F	O
Vanessa cardui	painted lady	CSS, MC	C	O

ATTACHMENT 8
WILDLIFE SPECIES OBSERVED/DETECTED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
AMPHIBIANS (Nomenclature from Crother 2001 and Crother et al. 2003)				
HYLIDAE	**TREE FROGS**			
Pseudacris cadaverina	California treefrog	RW, M, FM	C	V
Pseudacris regilla	Pacific treefrog	RW, M, FM	C	V
RANIDAE	**TRUE FROGS**			
Lithobates catesbeiana	American bullfrog	RW, M, FM	F	O, V
REPTILES (Nomenclature from Crother 2001 and Crother et al. 2003)				
IGUANIDAE	**IGUANID LIZARDS**			
Phrynosoma coronatum (San Diego/*blainvillii* pop.)	coast horned lizard	O	U	O
Sceloporus occidentalis	western fence lizard	CSS, MC, AG, O	C	O
Sceloporus orcutti	granite spiny lizard	CSS, MC, O	F	O
Uta stansburiana	common side-blotched lizard	CSS, MC	C	O
TEIIDAE	**WHIPTAIL LIZARDS**			
Aspidoscelis hyperythra beldingi	Belding's orange-throated whiptail	CSS, RW	U	O
~~*Aspidoscelis tigris punctilinealis*~~	~~Sonoran Tiger Whiptail~~	~~O, AG~~	~~U~~	
Aspidoscelis tigris stejnegeri	Coastal whiptail	O	U	O
CROTALIDAE	**RATTLESNAKES**			
Crotalus ruber	red diamond rattlesnake	O, MC	U	
Crotalus oreganus helleri	southern Pacific rattlesnake	MC	F	O
BIRDS (Nomenclature from American Ornithologists' Union 1998 and Unitt 2004)				
ANATIDAE	**DUCKS, GEESE, & SWANS**			
Anas platyrhynchos platyrhynchos	mallard	RW, M	U / Y	O
ODONTOPHORIDAE	**NEW WORLD QUAIL**			
Callipepla californica californica	California quail	CSS, MC	C / Y	O, V

ATTACHMENT 8
WILDLIFE SPECIES OBSERVED/DETECTED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
ARDEIDAE	**HERONS & BITTERNS**			
Egretta thula thula	snowy egret	RW, M	U / W	O
CATHARTIDAE	**NEW WORLD VULTURES**			
Cathartes aura	turkey vulture	F	F/ M, S	O
ACCIPITRIDAE	**HAWKS, KITES, & EAGLES**			
Accipiter cooperii	Cooper's hawk	RW, W, CSS	F / Y	O, V
Buteo jamaicensis	red-tailed hawk	F	C / Y	O, V
Buteo lineatus elegans	red-shouldered hawk	F	C / Y	O, V
Elanus leucurus	white-tailed kite	RW,M	U / Y	O, V
FALCONIDAE	**FALCONS & CARACARAS**			
Falco sparverius sparverius	American kestrel	AG, MC	F / Y	O
CHARADRIIDAE	**LAPWINGS & PLOVERS**			
Charadrius vociferus vociferus	killdeer	RW, M	U / Y	O
COLUMBIDAE	**PIGEONS & DOVES**			
Streptopeleia decaocto	Eurasian collared dove	W	U / Y	O
Zenaida macroura marginella	mourning dove	CSS, MC, O, AG, W	C / Y	O, V
CUCULIDAE	**CUCKOOS & ROADRUNNERS**			
Geococcyx californianus	greater roadrunner	CSS, MC, O, AG	F / Y	O
STRIGIDAE	**TYPICAL OWLS**			
Bubo virginianus	great horned owl	RW	U/ Y	O
APODIDAE	**SWIFTS**			
Aeronautes saxatalis	white-throated swift	RW, M	F / Y	O
TROCHILIDAE	**HUMMINGBIRDS**			
Archilochus alexandri	black-chinned hummingbird	CSS, MC	F / S	O, V
Calypte anna	Anna's hummingbird	CSS, MC, O, AG, W, RW	C / Y	O, V
Calypte costae	Costa's hummingbird	CSS, MC	F/ S	O,V

ATTACHMENT 8
WILDLIFE SPECIES OBSERVED/DETECTED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
PICIDAE	**WOODPECKERS & SAPSUCKERS**			
Colaptes auratus	northern flicker	RW, M, W	U / Y	O, V
Melanerpes formicivorus bairdi	acorn woodpecker	W	U / Y	O,V
Picoides nuttallii	Nuttall's woodpecker	W, RW	F / Y	O, V
Picoides pubescens turati	downy woodpecker	W, RW	U / Y	O, V
TYRANNIDAE	**TYRANT FLYCATCHERS**			
Empidonax difficilis	Pacific slope flycatcher	RW, M, W	U / S	O
Myiarchus cinerascens cinerascens	ash-throated flycatcher	RW, M, W	U / S	O
Sayornis nigricans semiatra	black phoebe	CSS, MC, O, AG, W, RW	C / Y	O, V
Sayornis saya	Say's phoebe	CSS, MC, O, AG	C / W	O
Tyrannus vociferans vociferans	Cassin's kingbird	CSS, MC, O, AG,	C / Y	O
LANIIDAE	**SHRIKES**			
Lanius ludovicianus	loggerhead shrike	AG	U / Y	O
VIREONIDAE	**VIREOS**			
Vireo huttoni huttoni	Hutton's vireo	RW,M	U / Y	O, V
CORVIDAE	**CROWS, JAYS, & MAGPIES**			
Aphelocoma californica	western scrub-jay	CSS, MC, O, AG, W	C / Y	O, V
Corvus brachyrhynchos hesperis	American crow	CSS, MC, O, AG, W, RW, M, U	C / Y	O, V
Corvus corax clarionensis	common raven	CSS, MC, O, AG, W, RW, M, U	F / Y	O, V
HIRUNDINIDAE	**SWALLOWS**			
Petrochelidon pyrrhonota tachina	cliff swallow	RW, W, AG, M	F / S	O
Stelgidopteryx serripennis	northern rough-winged swallow	RW, W, AG, M	F / S	O
PARIDAE	**CHICKADEES & TITMICE**			
Baeolophus inornatus transpositus	oak titmouse	W	U / Y	O,V
AEGITHALIDAE	**BUSHTIT**			
Psaltriparus minimus minimus	bushtit	CSS, MC, O, AG, W, RW	C / Y	O, V

ATTACHMENT 8
WILDLIFE SPECIES OBSERVED/DETECTED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
TROGLODYTIDAE	**WRENS**			
Thryomanes bewickii	Bewick's wren	CSS, MC, W, RW	F / Y	O, V
Troglodytes aedon parkmanii	house wren	CSS, MC, O, AG, W, RW,M	C / Y	O, V
TURDIDAE	**THRUSHES**			
Sialia mexicana occidentalis	western bluebird	AG	U / W	O
TIMALIIDAE	**BABBLERS**			
Chamaea fasciata henshawi	wrentit	CSS, MC, O, AG, W, RW	F / Y	O, V
MIMIDAE	**MOCKINGBIRDS & THRASHERS**			
Mimus polyglottos polyglottos	northern mockingbird	CSS, MC, AG, RW, M	C / Y	O, V
Toxostoma redivivum redivivum	California thrasher	CSS, MC, W	F / Y	O, V
STURNIDAE	**STARLINGS & MYNAS**			
Sturnus vulgaris	European starling (I)	O, U	C / Y	O, V
PTILOGONATIDAE	**SILKY FLYCATCHERS**			
Phainopepla nitens lepida	phainopepla	CSS, MC, RW, M	F / Y	O, V
PARULIDAE	**WOOD WARBLERS**			
Dendroica coronata	yellow-rumped warbler	CSS, MC	F / W	O, V
Dendroica petechia	yellow warbler	RW, M	U / S	O, V
Geothlypis trichas	common yellowthroat	RW, M	F / Y	O, V
Icteria virens auricollis	yellow-breasted chat	RW, M	F / Y	O, V
Vermivora celata	orange-crowned warbler	MC	F / Y	V
EMBERIZIDAE	**EMBERIZIDS**			
Melospiza melodia	song sparrow	CSS, MC, O, AG, W, RW,M	C / Y	O, V
Pipilo crissalis	California towhee	CSS, MC, O, AG, W	C / Y	O, V
Pipilo maculatus	spotted towhee	CSS, RW, M	C / Y	O, V
CARDINALIDAE	**CARDINALS & GROSBEAKS**			
Passerina caerulea salicaria	blue grosbeak	RW,M, W	F / S	O, V
Pheucticus melanocephalus maculatus	black-headed grosbeak	RW,M, W	F / S	O, V

ATTACHMENT 8
WILDLIFE SPECIES OBSERVED/DETECTED ON LILAC HILLS RANCH
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
ICTERIDAE	**BLACKBIRDS & NEW WORLD ORIOLES**			
Icterus bullockii	Bullock's oriole	CSS, MC, RW, M, W	U / S	O, V
Icterus cucullatus nelsoni	hooded oriole	RW, M	U / S	O, V
Molothrus ater	brown-headed cowbird	RW	U / Y	O
FRINGILLIDAE	**FINCHES**			
Carduelis psaltria hesperophilus	lesser goldfinch	CSS, MC, RW, M	C / Y	O, V
Carpodacus mexicanus frontalis	house finch	CSS, MC, RW, O, U	C / Y	O, V
MAMMALS (Nomenclature from Baker et al. 2003)				
LEPORIDAE	**RABBITS & HARES**			
Lepus californicus bennettii	San Diego black-tailed jackrabbit	CSS, AG	U	O
Sylvilagus audubonii	desert cottontail	CSS, MC	F	O
SCIURIDAE	**SQUIRRELS & CHIPMUNKS**			
Spermophilus beecheyi	California ground squirrel	CSS, MC, W, O, Ag	F	O
MURIDAE	**OLD WORLD MICE & RATS (I)**			
Neotoma lepida intermedia	San Diego desert woodrat	CSS, MC, W	F	D
CANIDAE	**CANIDS**			
Canis latrans	coyote	CSS,MC, O	U	O, S
PROCYONIDAE	**PROCYONIDS**			
Procyon lotor	northern raccoon	RW	U	T
CERVIDAE	**DEER**			
Odocoileus hemionus	mule deer	MC	U	O, T

(I) = Introduced species

ATTACHMENT 8
WILDLIFE SPECIES OBSERVED/DETECTED ON LILAC HILLS RANCH
(continued)

HABITATS

Ag = Agriculture
MC = Mixed chaparral
CSS = Coastal sage scrub
F = Flying overhead
FM = Freshwater marsh
M = Mesic areas and wetlands
O = Open places, waste places, roadsides, etc.
RW = Riparian woodlands
U = Urban
W = Woodlands

.

ABUNDANCE (based on Garrett and Dunn 1981)

C = Common to abundant; almost always encountered in proper habitat, usually in moderate to large numbers
F = Fairly common; usually encountered in proper habitat, generally not in large numbers
U = Uncommon; occurs in small numbers or only locally

SEASONALITY (birds only)

A = Accidental; species not known to occur under normal conditions; may be an off-course migrant
M = Migrant; uses site for brief periods of time, primarily during spring and fall months
S = Spring/summer resident; probable breeder on-site or in vicinity
T = Transient; uses site regularly but unlikely to breed on-site
V = Rare vagrant
W = Winter visitor; does not breed locally
Y = Year-round resident; probable breeder on-site or in vicinity

EVIDENCE OF OCCURRENCE

B = Burrow
C = Carcass/remains
D = Den site
O = Observed
S = Scat
T = Track
V = Vocalization

ATTACHMENT 8
WILDLIFE SPECIES OBSERVED/DETECTED ON LILAC HILLS RANCH
(continued)

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ATTACHMENT 9

Sensitive Plant Species Observed or with the Potential to Occur on Lilac Hills Ranch

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ATTACHMENT 9
SENSITIVE PLANT SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH

Scientific Name / Common Name	Sensitivity Code & Status* Federal/State CNPS Rank County Sensitive Plant List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Arctostaphylos rainbowensis Rainbow manzanita	---/--- CNPS Rank: 1B.1 County List A	Evergreen shrub; chaparral; rocky Cieneba, Las Posas soil, Pala; blooms Jan.–Feb; elevation 700–2,200 feet.	Not observed	Low	The project site is located just south of the known range for this species (Reiser 2001). Nearest known observations of this species are to the east of Keys Creek to the northwest of Valley Center. This shrub species would have been observed if present on-site.

ATTACHMENT 9
SENSITIVE PLANT SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* Federal/State CNPS Rank County Sensitive Plant List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Ambrosia pumila San Diego ambrosia	FE/--- CNPS Rank: 1B.1 County List A	Perennial herb; chaparral, coastal sage scrub, valley and foothill grassland, creek beds, vernal pools, often in disturbed areas; blooms May–Sept.; elevation less than 1,400 feet. Many occurrences extirpated in San Diego County.	Not observed	Low	Dense oak woodland habitats found on drainages on-site area not conducive to this species. The willow scrub habitat present in the southern portion of the site may have historically provided the best habitat on-site for this species; however, agricultural activities have disturbed the perimeters of the habitat where the species would have most likely been found.
Brodiaea orcuttii Orcutt's brodiaea	FSC/--- CNPS Rank: 1B.1 County List A	Perennial herb (bulbiferous); closed cone coniferous forest, chaparral, meadows and seeps, valley and foothill grassland, vernal pools, mesic, clay soil; blooms May–July; elevation less than 5,300 feet.	Not observed	Low	Suitable clay soils are lacking in the project area. The site also lacks wet meadows, seeps, and vernal pool habitats preferred by this species (Reiser 2001).

ATTACHMENT 9
SENSITIVE PLANT SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(Continued)

Scientific Name / Common Name	Sensitivity Code & Status* Federal/State CNPS Rank County Sensitive Plant List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Chorizanthe leptotheca Peninsular spine flower	---/--- CNPS Rank: 4.2 County List D	Annual herb; dry openings in chaparral, coastal sage scrub, lower montane coniferous forest; alluvial fans or granitic substrate; blooms May–Aug.; elevation 1,000–6,300 feet.	Not observed.	Moderate.	Suitable habitat for this species is present on the site in and around the undisturbed patches of southern mixed chaparral. This spineflower species was not observed, however, two other species of spineflower were observed on the site; fringed spineflower *Chorizanthe frimbiata,* and prostrate spineflower, *C. procumberns*.
Chorizanthe procumbens Prostrate spine flower	---/--- CNPS Rank: Delisted. County List D	Sandy openings in chaparral, sage scrub; common in disturbed areas adjacent to roads or fuel management zones.	Observed; small populations of this species occur in scattered patches in the project area. Estimated less than 100 individuals.	High	Observed in the project area within and adjacent to mixed chaparral, and all fuel management zones adjacent to mixed chaparral.

ATTACHMENT 9
SENSITIVE PLANT SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* Federal/State CNPS Rank County Sensitive Plant List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Harpagonella palmeri Palmer's grappling hook	FSC/--- CNPS Rank: 4.2 County List D	Annual herb; chaparral, coastal sage scrub, valley and foothill grassland; clay soils; blooms March–May; elevation less than 2,800 feet.	Not observed	Low	Suitable clay soils and lenses are lacking on the site. Palmer's grappling hook was not observed during surveys, but a related species, comb-bur (*Pectocarya linearis*) was found on-site.
Horkelia truncata Ramona horkelia	---/--- CNPS Rank: 1B.3 County List A	Perennial herb; cismontane woodland, chaparral, clay soils; blooms May–June; elevation 1,300–4,300 feet.	Not observed	Low	Although habitat suitable for this species occurs on-site, the project area is northwest of the known distribution of this species in San Diego County (Reiser 2001). Was not observed during surveys, but would have been noticed if present.
Juncus acutus ssp. *leopoldii* Southwestern spiny rush	---/--- CNPS Rank: 4.2 County List D	Perennial herb; coastal salt marsh, alkaline meadows, riparian marshes; blooms May–June; elevation less than 3,000 feet.	Observed; approximately 20 individuals were observed in the project area.	High	Observed in the project area within drainage courses.

ATTACHMENT 9
SENSITIVE PLANT SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(Continued)

Scientific Name / Common Name	Sensitivity Code & Status* Federal/State CNPS Rank County Sensitive Plant List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Pentachaeta aurea Golden-rayed pentachaeta	---/--- CNPS Rank: 4.2 County List D	Annual herb; mesic montane grasslands and sage scrub; blooms March–July; elevation 300–6,100 feet.	Not observed	Low	Suitable mesic grassland/sage scrub areas are lacking in the project area. Was not observed during surveys, but would have been noticed if present.
Piperia leptopetala Narrow-petaled rein orchid	---/--- CNPS Rank: 4.3	Perennial herb; cismontane woodland, lower and upper montane coniferous forests; blooms May to July; elevation 1,300–7,300 feet.	Not observed	Low	Suitable dry shrub-lands and woodlands are present on-site; however, project area is generally below its elevation range. Was not observed during surveys.
Quercus engelmannii Engelmann oak	---/--- CNPS Rank: 4.2 County List D	Tree; cismontane and riparian woodland, valley and foothill grasslands, chaparral; blooms March–May; elevation 400–4,300 feet.	Observed; 3 individuals were located in the project area.	High	Observed in the project area as individual trees in southern coast live oak riparian woodland habitat.

*Sensitivity Codes and Status:
FE – Federally listed endangered
FSC – Federal Species of Concern
CNPS – California Native Plant Society: Rank 1B.1 = Plant presumed extinct in California, seriously threatened in California; Rank 1B.3 = Plant presumed extinct in California, not very threatened in California; Rank 4.2 = Plant of limited distribution, fairly threatened in California; Rank 4.3 = Plant of limited distribution, not very threatened in California.
County of San Diego Sensitive Plant List:
List A = Plant rare, threatened, or endangered in California and elsewhere;
List D = Plant of limited distribution and uncommon, but not presently rare or endangered.

ATTACHMENT 9
SENSITIVE PLANT SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(continued)

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ATTACHMENT 10

CNDDB Forms

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

Date of Field Work (mm/dd/yyyy): 02/14/2011

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

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Chorizanthe procumbens*

Common Name: Prostrate spine flower

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

Total No. Individuals less than 100 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative 100 % flowering 100 % fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

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

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

Coordinates: 117 deg. 8 min. 9.3 sec W; 32 deg. 17 min. 15.8 sec. N

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

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Observed in the project area within and adjacent to mixed chaparral, and in fuel management zones adjacent to mixed chaparral.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

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

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/09

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

Date of Field Work (mm/dd/yyyy): 02/14/2011

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

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Juncus acutus ssp. leopoldii*

Common Name: Southwestern spiny rush

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

Total No. Individuals 20 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative 100 % flowering 100 % fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

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

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

Coordinates: 117 deg. 8 min. 16.2 sec W; 33 deg. 17 min. 25.3 sec. N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Observed in the project area within a drainage course.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)* Slide Print Digital
- Plant / animal ☐ ☐ ☐
- Habitat ☐ ☐ ☐
- Diagnostic feature ☐ ☐ ☐

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

DFG/BDB/1747 Rev. 6/16/09

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

Date of Field Work (mm/dd/yyyy): 02/14/2011

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

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Phrynosoma coronatum (San Diego/blainvillii pop.)*

Common Name: Coast horned lizard

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

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐

DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐

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

Coordinates: 117 deg. 8 min. 19.9 sec. W; 33 deg. 16 min. 54.1 sec. N

Source of Coordinates (GPS, topo. map & type): _____

GPS Make & Model _____

Horizontal Accuracy _____ meters/feet

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

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Species observed just off-site on a dirt road near southern mixed chaparral. However, suitable habitat and food source occur on-site

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

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

Photographs: *(check one or more)*

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

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

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

Date of Field Work (mm/dd/yyyy): 06/10/2011

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

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Scientific Name: *Odocoileus hemionus fuliginata*

Common Name: Southern mule deer

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

Total No. Individuals 3 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

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

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

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

Coordinates: A group of four individuals at: 117 deg. 8 min. 16.9 sec. W; 33 deg. 17 min. 21.3 sec. N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Observed on-site in southern mixed chaparral and southern coast live oak riparian woodland.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)* Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

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

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

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Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 03/03/2011

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California Native Species Field Survey Form

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Scientific Name: *Lepus californicus bennettii*

Common Name: San Diego black-tailed jackrabbit

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

Total No. Individuals 2 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall and Pala Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

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

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

Coordinates: One at: 117 deg. 7 min. 43.4 sec. W; 33 deg. 17 min. 19.6 sec. N
One at: 117 deg. 7 min. 27.2 sec. W; 33 deg. 16 min. 59.1 sec. N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Observed on-site near coastal sage scrub and orchards.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)*

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

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

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

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Source Code _____ Quad Code _____
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EO Index No. _____ Map Index No. _____

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California Native Species Field Survey Form

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Scientific Name: *Lanius ludovicianus*

Common Name: Loggerhead shrike

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

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐

T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐

Source of Coordinates (GPS, topo. map & type): _____

GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐

Horizontal Accuracy _____ meters/feet

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

Coordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. 17 min. 21.9 sec. N

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

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Observed on-site near southern mixed chaparral, orchard.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

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

Photographs: *(check one or more)*

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

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

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Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

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EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 05/17/2011

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California Native Species Field Survey Form

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Scientific Name: *Dendroica petechia*

Common Name: Yellow warbler

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

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Pala Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

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

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

Coordinates: 117 deg. 7 min. 16.4 sec. W; 33 deg. 16 min. 29.7 sec. N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Observed on-site in southern willow scrub and southern coast live oak riparian woodland.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)* Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

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

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

Date of Field Work (mm/dd/yyyy): 02/14/2011

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

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California Native Species Field Survey Form

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Scientific Name: *Neotoma lepida intermedia*

Common Name: San Diego desert woodrat

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

Total No. Individuals nests commo Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

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

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

Coordinates: 117 deg. 8 min. 9.9 sec. W; 33 deg. 17 min. 23.3 sec. N (center of 1 mile circle)

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

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Nests observed on-site in southern mixed chaparral, coastal sage scrub, and southern coast live oak riparian woodland.

Please fill out separate form for other rare taxa seen at this site.

Site Information

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

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

Photographs: *(check one or more)*

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

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

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

Date of Field Work (mm/dd/yyyy): 05/17/2011

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EO Index No. _____ Map Index No. _____

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California Native Species Field Survey Form

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Scientific Name: *Icteria virens auricollis*

Common Name: Yellow breasted chat

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

Total No. Individuals 5 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall and Pala Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

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

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

Coordinates: One at: 117 deg. 8 min. 18.2 sec. W; 33 deg. 17 min. 10.9 sec. N
Four individuals at or around: 117 deg. 7 min. 31.8 sec. W; 33 deg. 16 min. 31.2 sec. N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Observed on-site in southern willow scrub and southern coast live oak woodland.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)*

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

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

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

Date of Field Work (mm/dd/yyyy): 06/06/2011

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

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California Native Species Field Survey Form

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Scientific Name: *Sialia mexicana occidentalis*

Common Name: Western bluebird

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

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐

Source of Coordinates (GPS, topo. map & type): _____

GPS Make & Model _____

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐

Horizontal Accuracy _____ meters/feet

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

Coordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. 16 min. 32.5 sec. N

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

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Observed on-site in southern mixed chaparral.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

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

Photographs: *(check one or more)*

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

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

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Source Code _____ Quad Code _____
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California Native Species Field Survey Form

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Scientific Name: *Cathartes aura*

Common Name: Turkey vulture

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

Total No. Individuals Common Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

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

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

Coordinates: 117deg. 8min. 19.5 sec. W; 33deg. 17min. 46.6 sec. N. 117deg. 8min. 16.2 sec. W; 33deg. 17min. 28.3 sec. N.
117deg. 8min. 14.6 sec. W; 33deg. 17min. 18.9 sec. N. 117deg. 7min. 43.7 sec. W; 33deg. 16min. 33.9 sec. N.

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
This species was commonly observed flying over the site. A group of three vultures were observed roosting in a young orchard.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)*

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

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

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

Date of Field Work (mm/dd/yyyy): 02/25/2011

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Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

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Scientific Name: *Elanus leucurus*

Common Name: White-tailed kite

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

Total No. Individuals 2 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

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

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

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

Coordinates: One individual at: 117deg. 7min. 31.9sec. W; 33deg. 16min. 35.6sec. N
One individual at: 117deg. 7min. 43.5sec. W; 33deg. 16min. 29.7sec. N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Observed on-site near southern willow scrub and intensive agriculture row crops.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)* Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

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

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

Date of Field Work (mm/dd/yyyy): 02/14/2011

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Scientific Name: *Accipiter cooperii*

Common Name: Cooper's hawk

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

Total No. Individuals 4 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

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

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

Coordinates: One at: 117deg. 8 min. 13.7 sec. W; 33deg. 17min. 55.7sec. N. One at: 117deg. 8min. 23sec. W; 33deg. 17min. 40.2sec. N; One at: 117deg. 8min. 18.6sec. W; 33deg. 17min. 28.3sec. W. One at: 117deg. min. 35.9sec. W; 33deg. 16min. 30.2sec. N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Observed on-site in 4 seperate locations including southern coast live oak riparian woodland, and an orchard.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)* Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

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

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

Date of Field Work (mm/dd/yyyy): 07/26/2011

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Scientific Name: *Crotalus ruber*

Common Name: Red diamond rattlesnake

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

Total No. Individuals 2 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

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

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

Coordinates: One individual at: 117 deg. 8 min. 13 sec. W; 33 deg. 17 min. 32.1 sec. N
One individual at: 117 deg. 8 min. 2.5 sec. W; 33 deg. 17 min. 20.5 sec. N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Observed on-site near southern coast live oak riparian woodland, southern mixed chaprral.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)* Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

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

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

Date of Field Work (mm/dd/yyyy): 02/14/2011

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Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

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Scientific Name: *Quercus engelmannii*

Common Name: Engelmann oak

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

Total No. Individuals 3 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: 100 % vegetative _____ % flowering _____ % fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

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

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

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

Coordinates: One individual at: 117 deg. 8 min. 14.4 sec. W; 33 deg. 17 min. 27.2 sec. N
Two individuals at: 117 deg. 8 min. 13.3 sec. W; 33 deg. 17 min. 11 sec. N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Observed in the project area as individual trees in southern coast live oak riparian woodland habitat

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)*

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

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

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

Date of Field Work (mm/dd/yyyy): 06/02/2011

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Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

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California Native Species Field Survey Form

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Scientific Name: *Aspidoscelis hyperythra beldingi*

Common Name: Belding's orange-throated whiptail

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

Total No. Individuals 4 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN

Quad Name: Bonsall Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____

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

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

Coordinates: One at: 117 deg. 8 min. 20.5 sec. W; 33 deg. 17 min. 10.1 sec. N. One at 117 deg. 8 min. 12.2 sec. W; 33 deg. 17 min. 11.5 sec. N; One at 117 deg. 8 min. 5.6 sec. W; 33 deg. 17 min. 18.2 sec. N. One at 117 deg. 8 min. 9.5 sec. W; 33 deg. 17'

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
This species was observed in four locations on-site incuding coastal sage scrub, southern mixed chaparral, and southern coast live oak riparian woodland.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

Photographs: *(check one or more)*

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

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

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

Date of Field Work (mm/dd/yyyy): 07/26/2011

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EO Index No. _____ Map Index No. _____

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Scientific Name: *Cnemidophorus multiscultatus tigris*

Common Name: Coastal western whiptail

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

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Gerry Scheid
Address: 1927 Fifth Avenue
San Diego, Ca 92101-2358
E-mail Address: gscheid@reconenvironmental.com
Phone: (619) 308-9333

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

Located within the Lilac Hill Ranch project 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.

County: San Diego Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN(

Quad Name: Bonsall/Pala Elevation: _____

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐

Source of Coordinates (GPS, topo. map & type): _____

GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐

Horizontal Accuracy _____ meters/feet

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

Coordinates: 117 deg. 7 min. 32.2 sec. W; 33 deg. 17 min. 1.6 sec. N

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

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Observed on-site near a citrus orchard.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Agriculture

Visible disturbances: Fuel management zones and agriculture

Threats: Agriculture and development

Comments:

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

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

Photographs: *(check one or more)*

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

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

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ATTACHMENT 11

Sensitive Wildlife Species Observed or with the Potential to Occur on Lilac Hills Ranch

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ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Hermes copper *Lycaena hermes*	FSC/-- County Group 1	Chaparral and coastal sage scrub where host plant spiny redberry (*Rhamnus crocea)* occurs. Adult emergence late May to July.	Not observed.	Moderate	Host plant spiny redberry present on-site associated with California buckwheat (*Eriogonum fasciculatum)* in southern mixed chaparral vegetation.
Monarch butterfly *Danaus plexippus*	---/--- County Group 2	Species can overwinter in southern California; may roost in eucalyptus, Monterey pine, and Monterey cypress; host plant for eggs is milkweed (*Asclepias*); open areas containing milkweed and other nectar plants.	Not observed.	Low	Host plant (milkweed) not observed on-site. Eucalyptus trees present, but without host plant it is unlikely that this species roosts on-site.
Arroyo toad *Anaxyrus ~~Bufo~~ californicus*	FE, CSC County: Group 1	Open streamside sand/gravel flats. Quiet, shallow pools along stream edges are breeding habitat. Nocturnal except during breeding season (March–July).	Not observed.	Low	Site lacks suitable habitat. Habitat assessment determined streamside habitat canopy cover too dense and lacks sand/gravel flats and pools required for breeding.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Southern Pacific pond turtle *Actinemys* [=*Clemmys*] *marmorata pallida*	FSC/CSC County: Group 1	Ponds, small lakes, marshes, slow-moving, sometimes brackish water.	Not observed.	Moderate	Intermittent streams on-site may support pools suitable for this species.
Coast horned lizard *Phrynosoma coronatum* (San Diego/*blainvillii* pop.)	FSC/CSC County: Group 2	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants for forage.	Observed just off-site near southern mixed chaparral.	High	Species observed just off-site, however, suitable habitat and food source occur on-site.
Belding's orange-throated whiptail *Aspidoscelis hyperythra beldingi*	FSC/CSC County: Group 2	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	Observed on-site near coastal sage scrub, southern mixed chaparral, and southern coast live oak riparian woodland.	High	This species was observed in four locations on-site and is expected to occur in other suitable habitat areas.
Coastal ~~western~~ whiptail *Aspidoscelis tigris stejnegeri*~~*Cnemidophorus multiscultatus tigris*~~	FSC/-- County: Group 2	Coastal sage scrub, chaparral, woodlands, and streamsides where plants are sparsely distributed.	Observed on-site near a citrus orchard.	High	One individual of this lizard species was observed on-site and it is expected to occur in other suitable habitat areas.
Silvery legless lizard *Anniella pulchra pulchra*	FSC/CSC County: Group 2	Herbaceous layers with loose soil in coastal scrub, chaparral, and open riparian. Prefers dunes and sandy washes near moist soil.	Not observed.	Low	Project site lacks preferred habitat for this species.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Coastal rosy boa *Lichanura trivirgata roseofusca*	FSC County: Group 2	Coastal sage scrub, chaparral in inland and desert locales with rocky soils.	Not observed.	Moderate	Project site has some suitable habitat for this species, but may be too coastal.
San Diego ring-necked snake *Diadophis punctatus similis*	--/-- County: Group 2	Rocky areas in wet locales, such as swamps, damp forests, or riparian woodlands.	Not observed.	Moderate	Suitable riparian woodland habitat occurs on-site.
Red diamond rattlesnake *Crotalus ruber*	FSC/CSC County: Group 2	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.	Observed on-site near southern coast live oak riparian woodland, southern mixed chaparral.	High	Two individuals were observed on-site and suitable habitat is present.
Western least bittern *Ixobrychus exilis hesperis*	FSC/CSC	Brackish and freshwater marshes in the coastal lowland. Rare summer resident, rare in winter.	Not observed.	Low	Suitable habitat for this species not present on-site. Nearby historic occurrence was at an artificial lake.
Cooper's hawk (nesting) *Accipiter cooperii*	~~CSC~~WL County: Group 1	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas. Migrant and winter visitor.	Observed on-site in southern coast live oak riparian woodland, orchard.	High	Cooper's hawks were observed on-site in four separate locations and suitable habitat to support this species is present.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Sharp-shinned hawk (nesting) *Accipiter striatus velox*	CSC County: Group 1	Open deciduous woodlands, forests, edges, parks, residential areas. Migrant and winter visitor.	Not observed.	Moderate	Although not observed, suitable habitat for this species is present on-site. Would have been seen if present.
Golden eagle (nesting and wintering) *Aquila chrysaetos canadensis*	CSC, CFP, BEPA County: Group 1	Require vast foraging areas in grassland, broken chaparral, or sage scrub. Nest in cliffs and boulders. Uncommon resident.	Not observed.	Low	Some suitable habitat is present on-site, but human activities may deter this species from using the area.
Northern harrier (nesting) *Circus cyaneus hudsonius*	CSC County: Group 1	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.	Not observed.	Moderate	Although the species not observed, suitable habitat for it is present on-site. Would have been seen if present.
White-tailed kite (nesting) *Elanus leucurus*	CFP County: Group 1	Nest in riparian woodland, oaks, sycamores. Forage in open, grassy areas. Year round resident.	Observed on-site near southern willow scrub, intensive agriculture – row crops.	High	A pair of white-tailed kites was commonly observed in the southern part of the project area.
Turkey vulture *Cathartes aura*	County: Group 1	Many habitats.	Observed on-site flying overhead and roosting in orchard.	High	This species was commonly observed flying over the site. A group of three vultures were observed roosting in a young orchard.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Western burrowing owl (burrow sites) *Athene cunicularia hypugaea*	FSC/CSC County: Group 1	Grassland, agricultural land, coastal dunes. Require rodent burrows. Declining resident.	Not observed.	Low	Habitat assessment determined that while suitable habitat is present (i.e., agricultural fields), the site generally lacked sufficient burrows and prey species to support burrowing owls.
Southwestern willow flycatcher *Empidonax traillii extimus*	FE, SE County: Group 1	Nesting restricted to willow thickets. Also occupies other woodlands. Rare spring and fall migrant, rare summer resident. Extremely localized breeding.	Not observed.	Low	Suitable habitat for this species is generally lacking on-site with the exception of a small patch of dense willow scrub in the southern portion of the site. However, this patch of willow scrub is too narrow to likely support the species.
Loggerhead shrike *Lanius ludovicianus*	CSC County: Group 1	Open foraging areas near scattered bushes and low trees.	Observed on-site near southern mixed chaparral, orchard.	High	One individual of this species was observed on-site. Suitable habitat is present.
Least Bell's vireo (nesting) *Vireo bellii pusillus*	FE, SE County: Group 1	Willow riparian woodlands. Summer resident.	Not observed.	Low	Although suitable willow scrub habitat occurs on-site, protocol surveys failed to detect this species.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Coastal cactus wren *Campylorhynchus brunneicapillus couesi*	CSC County: Group 1	Maritime succulent scrub, coastal sage scrub with *Opuntia* thickets. Rare localized resident.	Not observed.	Low	Suitable habitat for this species is not present on-site. Cactus patches observed on-site were predominately non-native Indian-fig (*Opuntia ficus-indica*), a species not preferred by cactus wren.
Coastal California gnatcatcher *Polioptila californica californica*	FT, CSC County: Group 1	Coastal sage scrub, maritime succulent scrub. Resident.	Not observed.	Low	Although suitable habitat is present for this species, protocol surveys failed to detect this species on-site. Portions of the project area lie within the critical habitat designated for this species.
Western bluebird *Sialia mexicana occidentalis*	County: Group 2	Open woodlands, farmlands, orchards.	Observed on-site in southern mixed chaparral.	High	One individual of this species was observed on-site. Suitable habitat to support this species present.
Yellow warbler (nesting) *Setophaga [=Dendroica] petechia*	CSC County: Group 2	Breeding restricted to riparian woodland. Spring and fall migrant, localized summer resident, rare winter visitor.	Observed on-site in southern willow scrub and southern coast live oak riparian woodland.	High	One individual was observed on-site. Suitable habitat present on-site in the riparian woodlands and scrubs to support this species.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Yellow-breasted chat (nesting) *Icteria virens auricollis*	CSC County: Group 1	Dense riparian woodland. Localized summer resident.	Observed on-site in southern willow scrub and southern coast live oak woodland.	High	Five individuals were observed on-site. Suitable habitat present on-site in the riparian woodlands and scrubs to support this species.
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	FSC/CSC County: Group 1	Coastal sage scrub, chaparral, grassland. Resident.	Not observed.	Low	Although suitable habitat for this species occurs in the project area, this species was not observed during surveys. Would have been seen if present.
Grasshopper sparrow (nesting) *Ammodramus savannarum perpallidus*	FSC/-- County: Group 1	Tall grass areas. Localized summer resident, rare in winter.	Not observed.	Low	Suitable tall grass habitat is not present in the project area.
Bell's sage sparrow *Amphispiza belli belli*	CSC County: Group 1	Chaparral, coastal sage scrub. Localized resident.	Not observed.	Low	Although suitable habitat for this species occurs in the project area, this species was not observed during surveys. Would have been seen if present.
California leaf-nosed bat *Macrotus californicus*	CSC	Low deserts. Caves, mines, buildings. Colonial. Migrational. Mostly near Colorado River in California.	Not observed.	Low	Project location is outside of preferred geographical range for this species.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Pallid bat *Antrozous pallidus*	CSC County: Group 2	Arid deserts and grasslands. Shallow caves, crevices, rock outcrops, buildings, tree cavities. Especially near water. Colonial. Audible echolocation signal.	Not observed.	Low	Project location is outside of preferred geographical range for this species.
Townsend's western big-eared bat *Corynorhinus townsendii townsendii*	FSC/CSC County: Group 2	Caves, mines, buildings. Found in a variety of habitats, arid and mesic. Individual or colonial. Extremely sensitive to disturbance.	Not observed.	Moderate	Suitable habitat occurs on-site for this species; however, human disturbance may preclude use of the area by this bat.
Western mastiff bat *Eumops perotis californicus*	CSC	Woodlands, rocky habitat, arid and semiarid lowlands, cliffs, crevices, buildings, tree hollows. Audible echolocation signal.	Not observed.	Moderate	Suitable habitat occurs on-site for this species; however, human disturbance may preclude use of the area by this bat.
Pocketed free-tailed bat *Nyctinomops femorosaccus*	CSC County: Group 2	Normally roost in crevice in rocks, slopes, cliffs. Lower elevations in San Diego and Imperial Counties. Colonial. Leave roosts well after dark.	Not observed.	Moderate	Suitable habitat occurs on-site for this bat species.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Big free-tailed bat *Nyctinomops macrotis*	CSC County: Group 2	Rugged, rocky terrain. Roost in crevices, buildings, caves, tree holes. Very rare in San Diego County. Colonial. Migratory.	Not observed.	Low	Some suitable habitat occurs on-site for this species; however, project site may be outside of the preferred geographical range for this species.
Western yellow bat *Lasiurus xanthunus*		Dry tropical forest to semi-tropical wet forests; in southwestern U.S. can be found roosting in the skirt of dead fronds in both native and non-native palm trees.	Not observed.	Low	While some palm trees occur in the project area, there is not likely enough habitat to support a population of this bat species.
Small-footed myotis *Myotis ciliolabrum*	FSC/-- County Group 2	Great Basin desert scrub and pinion-juniper forest in California; roosts in rock crevices, caves, tunnels, mines, and sometimes buildings and under bridges.	Not observed.	Low	Suitable habitat for this bat species does not occur in the project area.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Long-eared myotis *Myotis evotis*	FSC/-- County: Group 2	Occurs in semiarid shrublands, sage, chaparral, and agricultural areas, but is usually associated with coniferous forest; roost under tree bark, in hollow trees, cavers, mines, cliff crevices, sinkholes, and rocky outcrops on the ground. Buildings and under bridges may also be used.	Not observed.	Moderate	Some suitable habitat for this bat species occurs in the project area; however, the preferred habitat (coniferous forest) is not present.
Fringed myotis *Myotis thysanodes*	FSC/-- County: Group 2	Oak woodland, forest, desert scrub, caves, mines.	Not observed.	Moderate	Some oak woodlands occur in the project area.
Long-legged myotis *Myotis volans*	FSC/-- County: Group 2	Associated with water in many areas; pinyon juniper, Joshua tree woodland, montane coniferous forest, forested habitat along the coast; roost in hollow trees, rock crevices, mines, buildings.	Not observed.	Low	Preferred habitat for this species does not occur in project area.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Yuma myotis *Myotis yumanensis*	FSC/CSC County: Group 2	Associated with permanent sources of water, typically rivers and streams; riparian, arid scrublands, deserts, forests; roosts in bridges, buildings, cliff crevices, caves, mines, and trees.	Not observed.	Low	Suitable habitat for this species does not occur on-site.
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	FSC/CSC County Group 2	Open areas of scrub, grasslands, agricul-tural fields.	Observed on-site near coastal sage scrub and orchards.	High	Two individuals of this species were observed on-site. Suitable habitat to support this species occurs in the project area.
Dulzura pocket mouse *Chaetodipus californicus femoralis*	FSC/CSC County: Group 2	Brushy areas of coastal sage scrub, chamise-redshank & montane chaparral, sagebrush, annual grassland, valley foothill hardwood, valley foothill hardwood–conifer & montane hardwood. Probably most attracted to interface of grassland and brush.	Not observed.	Moderate	Suitable habitat for this species occurs on-site. Areas near agricultural operations may be affected by pest control management practices.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Northwestern San Diego pocket mouse *Chaetodipus fallax fallax*	FSC/CSC County: Group 2	San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.	Not observed.	Low	Project area lacks suitable habitat with sandy soils.
Stephens' kangaroo rat *Dipodomys stephensi*	FE, ST County: Group 1	Grassland, open areas.	Not observed.	Low	Habitat assessment concluded that area lacks characteristics required by this species. No kangaroo rat burrows were observed. Agricultural pest control activities may affect the likely presence of this species.
Southern grasshopper mouse *Onychomys torridus ramona*	CSC County: Group 2	Low open and semi-open scrub habitats; coastal sage scrub, mixed chaparral, low sagebrush, riparian scrub, and annual grassland with scattered shrubs.	Not observed.	Low	While some areas of suitable habitat for this species are present in the project area, agricultural pest control activities may affect the likely presence of this species.
San Diego desert woodrat *Neotoma lepida intermedia*	FSC/CSC County: Group 2	Coastal sage scrub and chaparral.	Nests observed on-site in southern mixed chaparral, coastal sage scrub, and southern coast live oak riparian woodland.	High	Woodrat nests were commonly observed in the southern mixed chaparral, coastal sage scrub, and riparian woodlands on-site.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA
(continued)

Scientific Name / Common Name	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List	Habitat Preference / Requirements	Verified On-site / Evidence	Potential to Occur On-site	Factual Basis for Determination of Occurrence Potential
Ringtail *Bassariscus astutus*	CFP County: Group 1	Cliffs, rocky ravines, chaparral communities.	Not observed.	Low	Human presence and level of activity may preclude this species from using habitats in the project area.
Mountain lion *Puma concolor*	CFP County: Group 2	Many habitats.	Not observed.	Moderate	Project site supports prey species used by mountain lion, and the site covers a large acreage and has a water source. Level of human activity and presence may deter species from area.
Southern mule deer *Odocoileus hemionus fuliginata*	County: Group 2	Many habitats.	Observed on-site in southern mixed chaparral.	High	Three mule deer were observed on-site, and suitable habitat to support this species is present.

*Sensitivity Codes and Status: FE – Federally listed endangered; FT – Federally listed threatened; FSC – Federal Species of Concern; SE – California State listed endangered; ST – California State listed threatened; CSC – California species of special concern; CFP – California fully protected species; BEPA – Bald Eagle Protection Act; WL=CDFW Watch List.
County of San Diego Sensitive Animal List: Group 1 = Animals of high sensitivity (listed or natural history requirements); Group 2 = Animals declining, but not in immediate threat of extinction or extirpation.

ATTACHMENT 11
SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR ON LILAC HILLS RANCH
(continued)

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ATTACHMENT 12

Jurisdictional/Wetland Delineation Report for the Lilac Hills Ranch Specific Plan and General Plan Amendment Area, Escondido, California

RECON

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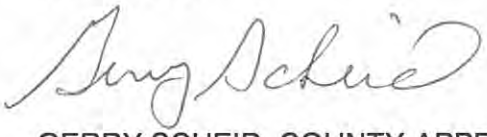
JURISDICTIONAL/WETLAND DELINEATION REPORT LILAC HILLS RANCH SAN DIEGO COUNTY, CALIFORNIA

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

PROJECT APPLICANT:
ACCRETIVE INVESTMENTS, INC.
12275 EL CAMINO REAL, SUITE 110
SAN DIEGO, CA 92130
ATTN: JON RILLING
PH: 858-546-0700

PREPARED FOR:
COUNTY OF SAN DIEGO
5510 OVERLAND AVENUE, THIRD FLOOR
SAN DIEGO, CA 92123
KIVA PROJECT: 09-0112513
SP 38-12-001
GPA 3800-12-001
RZ 360-12-003
TM 5571 RPL3 and 5572 RPL3
MUP 3300-12-005

PREPARER:



GERRY SCHEID, COUNTY-APPROVED PREPARER
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SAN DIEGO, CA 92101
619-308-9333

September 10, 2012

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1.0 Summary of Findings

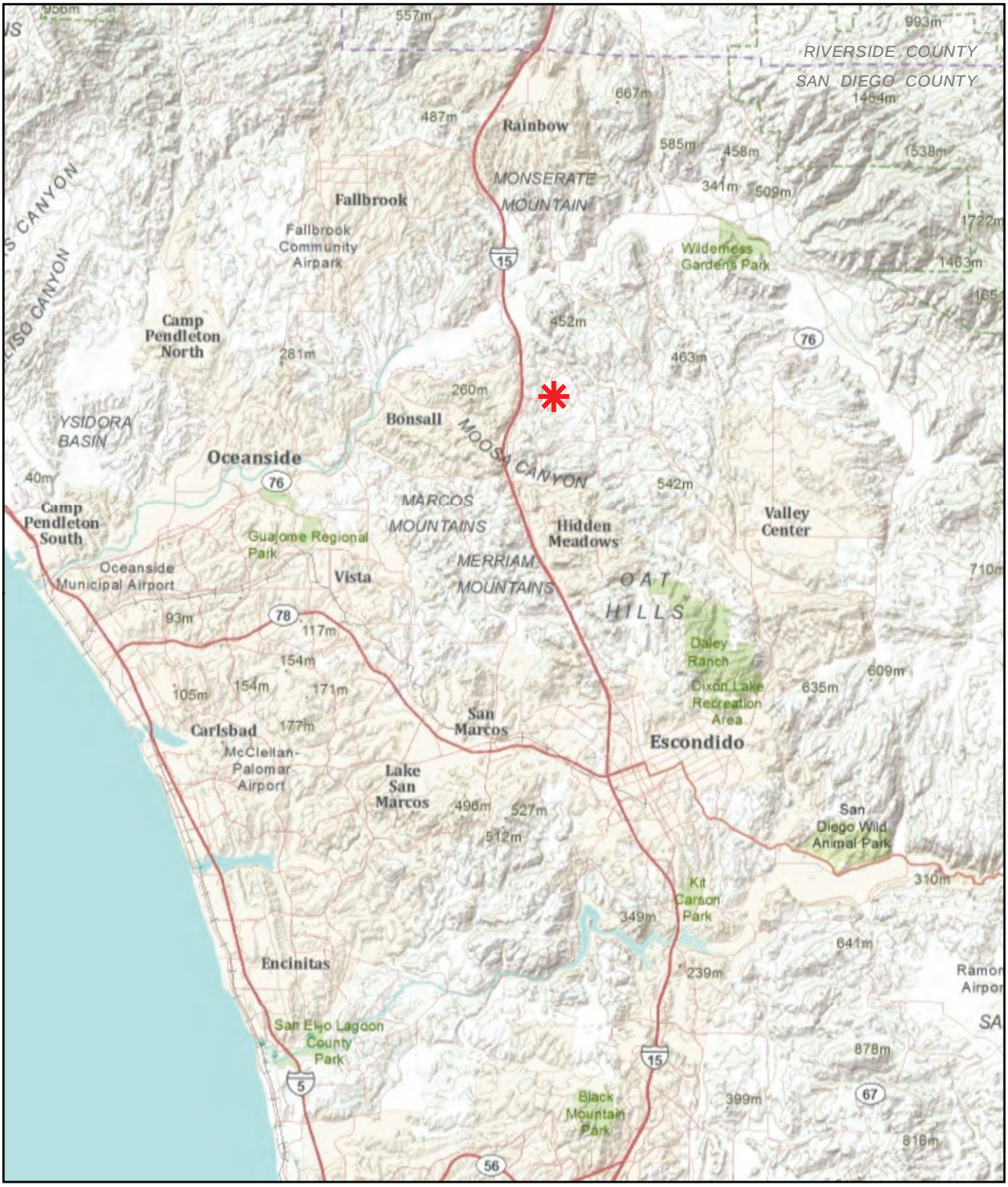
RECON biologists conducted a routine wetland delineation on the approximately 610-acre Lilac Hills Ranch Master Plan project site during the spring and early summer of 2011. Methods for delineating wetlands followed guidelines set forth by the U.S. Army Corps of Engineers (USACE), including the 1987 wetland delineation manual and the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 1987, 2008).

A total of 13.44 acres of jurisdictional USACE wetlands were delineated on the site that had the three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. An additional 4.69 acres of non-wetland waters of the U.S. were delineated on-site, and these non-wetland areas were delineated by an observable ordinary high water mark.

State wetlands and waters under the jurisdiction of the California Department of Fish and Game (CDFG) and Regional Water Quality Control Board (RWQCB) were also delineated on-site. CDFG/RWQCB jurisdiction totals 4.18 acres of streambed and 39.35 acres of wetlands.

County of San Diego (County) Resource Protect Ordinance (RPO) wetlands were also delineated on the project site. A total of 42.88 acres of RPO wetlands are identified.

Impacts to jurisdictional waters, including any wetlands, on-site would require a 404 Permit from the USACE, a 1602 Streambed Alteration Agreement from CDFG, and a 401 Water Quality Certification from the RWQCB. Impacts to County RPO wetlands are to be avoided to the maximum extent possible, and any unavoidable impacts would require County approval and mitigation per County standards.



Project Location

FIGURE 1

Regional Location

RECON

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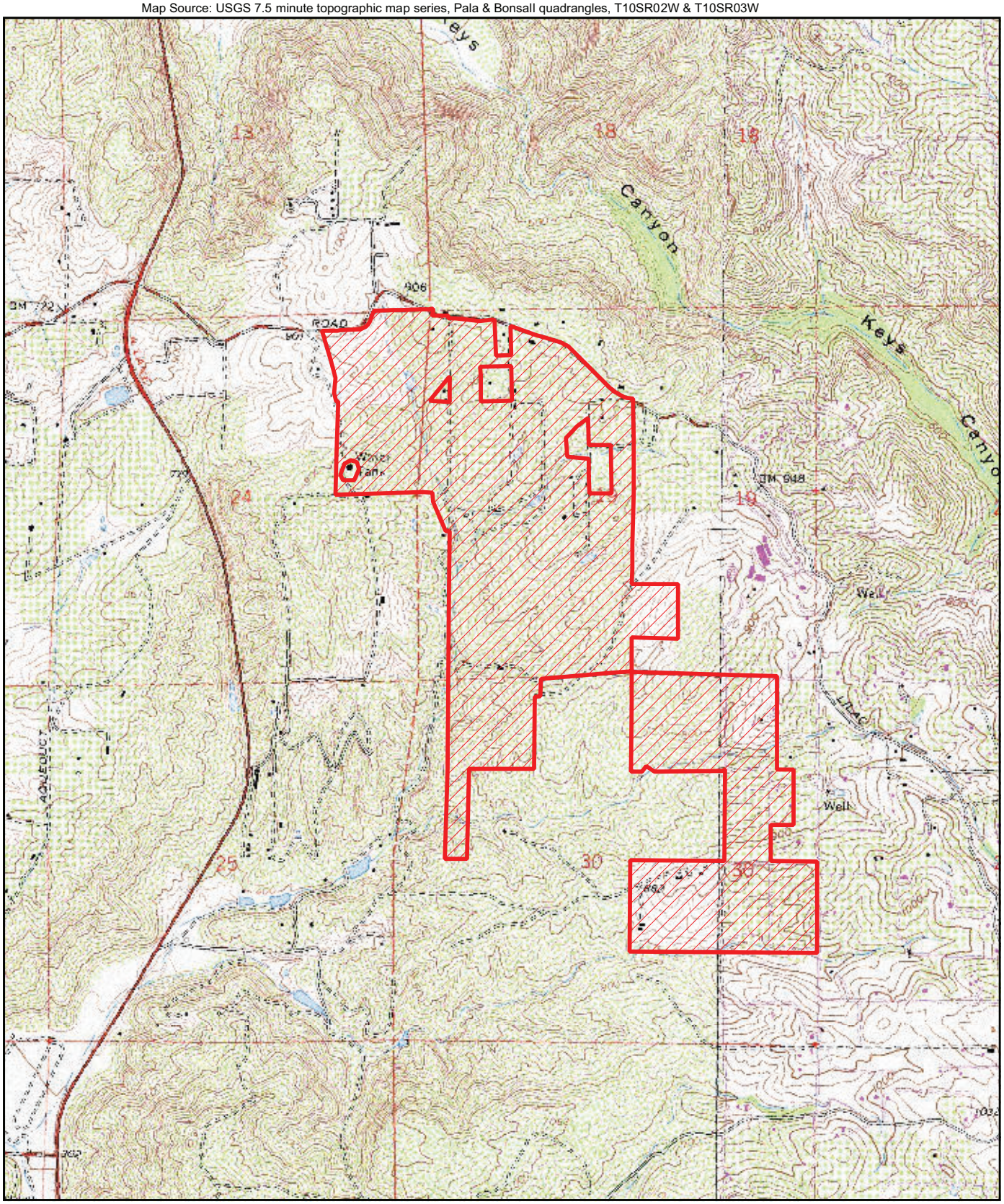
Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



0 Feet 2,000

Project Boundary

RECON

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FIGURE 2

Project Location on USGS Map

Image source: Custom image provided by client (flown March 2012), and Aerials Express, All Rights Reserved (flown March 2010)

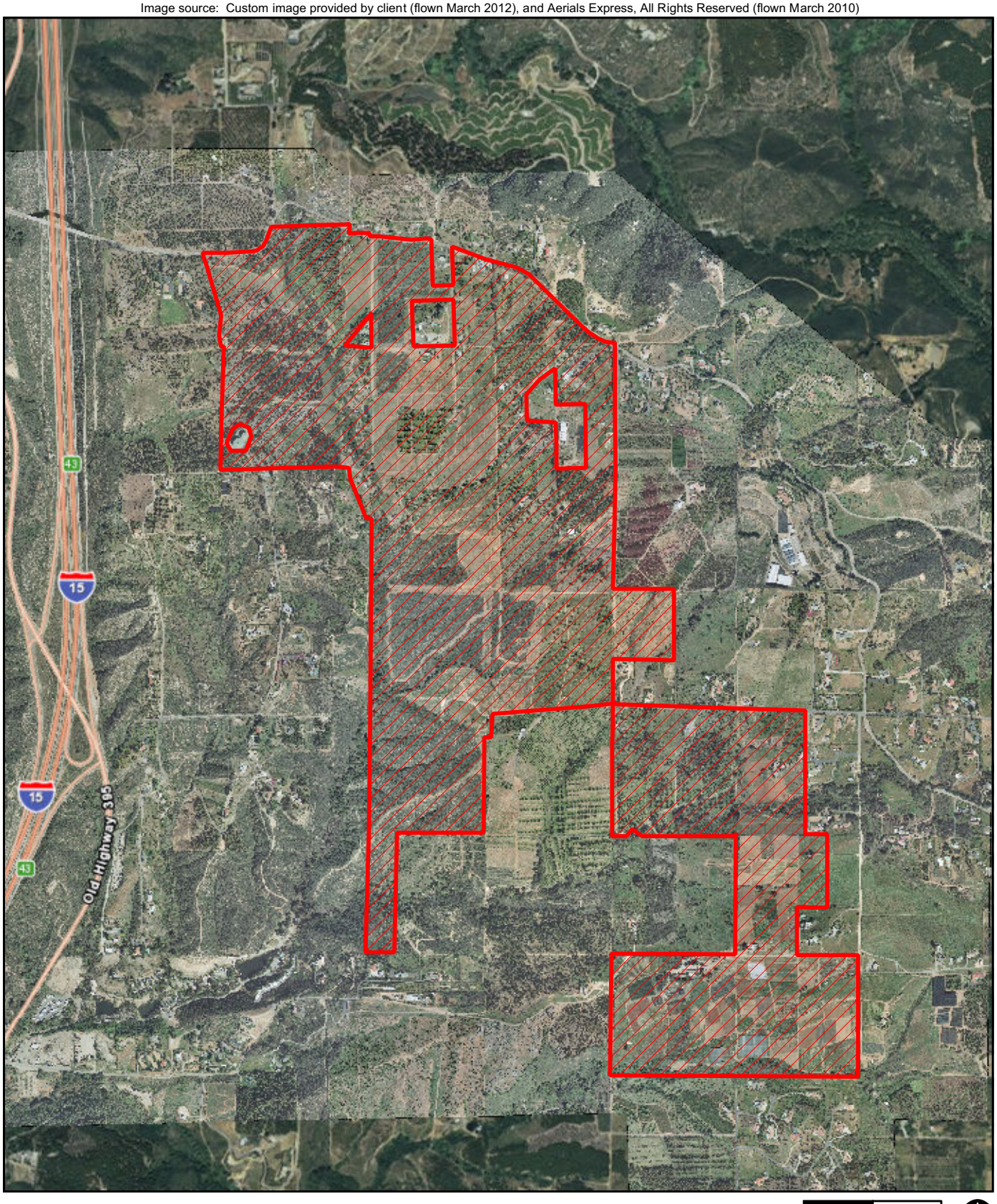

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FIGURE 3

Project Location on Aerial Photograph

2.0 Introduction

This report describes the results of a wetland delineation conducted on the Lilac Hills Ranch project site. The wetland delineation is used to identify and map the extent of the federal jurisdictional waters of the U.S., including adjacent wetlands, state wetlands/waters, and County RPO wetlands.

The Lilac Hills Ranch project area is located within an unincorporated portion of the County of San Diego, California (Figure 1). The project site is located in Townships 10 South, Range 2 and 3 West, on the U.S. Geological Survey (USGS) 7.5-minute topographical maps, Bonsall, California, and Pala California quadrangles (Figure 2). The Lilac Hills Ranch project site lies east of Interstate 15 and to the south and east of West Lilac Road (Figure 3).

The purpose of this study was to identify and map the location of jurisdictional waters to provide necessary background information for analysis by USACE, CDFG/RWQCB, and the County. The biological technical report for the Lilac Hills Ranch project (RECON 2012) contains additional detailed biological resource information for the survey area.

3.0 Methods and Jurisdictions

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. RECON biologists Gerry Scheid, Anna Bennett, and Erin McKinney conducted the routine delineation fieldwork. Prior to conducting the delineation, aerial photographs and USGS topographic maps of the site were examined. Once on-site, the potential federal, state, and county jurisdictional areas were examined to determine the presence and extent of any jurisdictional waters.

3.1 U.S. Army Corps of Engineers

As stated in the federal regulations for the Clean Water Act (CWA), wetlands are defined as:

> . . . those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions (Environmental Protection Agency [EPA], 40 CFR 230.3 and CE, 33 Code of Federal Regulations [CFR] 328.3).

Wetlands are delineated using three parameters, which include hydrophytic vegetation, wetland hydrology, and hydric soils. According to USACE, indicators for all three parameters must be present to qualify an area as a wetland.

3.1.1 Regulatory Definition

In accordance with Section 404 of the CWA, USACE regulates the discharge of dredged or fill material into waters of the U.S. The term "waters of the United States" is defined as:

- All waters currently used, or used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation, or destruction of which could affect foreign commerce including any such waters: (1) which could be used by interstate or foreign travelers for recreational or other purposes; or (2) from which fish or shellfish are, or could be taken and sold in interstate or foreign commerce; or (3) which are used or could be used for industries in interstate commerce.
- All other impoundments of waters otherwise as defined as waters of the United States under the definition;
- Tributaries of waters identified above;
- The territorial seas; and
- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in the paragraphs above [33 CFR Part 328.3(a)].

3.1.2 Isolated Waters

Federal regulatory authority only extends to activities that affect interstate commerce pursuant to Article 1, Section 8 of the U.S. Constitution. Prior to 1985, in accordance with the interstate commerce requirement, USACE restricted its jurisdiction on isolated (intrastate) waters such as ponds or vernal pools lacking connection to waters of the U.S. On September 12, 1985, the EPA issued a memorandum asserting USACE's jurisdiction over isolated waters that are used or could be used by migratory birds or endangered species. This assertion became known as the "Migratory Bird Rule."

Consequently, the definition of "waters of the United States" in USACE regulations was modified to include isolated waters that qualified under the Migratory Bird Rule.

On January 9, 2001, the Supreme Court of the United States issued a decision on *Solid Waste Agency of Northern Cook County versus United States Army Corps of Engineers, et al.* with respect to whether the use of an isolated, intrastate pond by migratory birds is sufficient interstate commerce to warrant USACE jurisdiction over that pond, pursuant to Section 404 of the CWA. The court held that the Migratory Bird Rule is not a fairly supported interpretation of the term "waters of the United States." By determining that Congress was not intended to regulate isolated wetlands under the CWA, the Supreme Court shifted the regulatory burden to states and local governments. However, the 2001 ruling did not refute the court's earlier decision in the *United States versus Riverside Bayview Homes, Inc.* that upheld USACE jurisdiction over wetlands adjacent to navigable waters, nor did it express any opinion on the authority of USACE to regulate wetlands that are not adjacent to bodies of open water above and beyond the Migratory Bird Rule.

3.1.3 Wetland Parameters

3.1.3.1 Hydrophytic Vegetation

Hydrophytic vegetation is defined as "the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content" (USACE 1987). The potential wetland areas were surveyed by walking throughout the site and making observations of those areas exhibiting characteristics of jurisdictional waters or wetlands. Vegetation units with the potential to be wetlands were examined, and data for each vegetation stratum (i.e., tree, shrub, herb, and vine) were recorded on the datasheet provided in the 2008 Arid Supplement (USACE 2008). The percent absolute cover of each species present was visually estimated and recorded.

The wetland indicator status of each species recorded was determined by using the list of wetland plants for California provided by the United States Fish and Wildlife Service (USFWS 1997). An obligate (OBL) indicator status refers to plants that have a 99 percent probability of occurring in wetlands under natural conditions. A Facultative-Wet (FACW) indicator status refers to plants that occur in wetlands (67–99 percent probability), but are occasionally found in non-wetlands. A Facultative (FAC) indicator status refers to plants that are equally likely to occur in wetlands or non-wetlands (estimated probability 34–66 percent). Facultative upland (FACU) species are more often found in upland sites. Upland (UPL) species have a high probability to occur in upland sites. An NI indicator status refers to species that have insufficient data available to determine an indicator status at this time for the local region.

Plant species nomenclature follows that contained in *The Jepson Manual* (Hickman 1993). Dominant species with an indicator status of "NI" (not indicated) or not listed in the USFWS 1997 list were evaluated as either wetland or upland indicator species based on local professional knowledge of where the species are most often observed in habitats that are characteristic in southern California.

There are three indicators or tests to determine hydrophytic vegetation on a site: the dominance test, prevalence index, and morphological adaptations. The 50/20 rule is a repeatable and objective procedure for selecting dominant plant species and is recommended when data are available for all species in the community (USACE 2008). Dominant species are those plants that individually or collectively contribute more than 50 percent of the total vegetative cover plus those species that, by themselves, comprise 20 percent or more of the total cover.

If the vegetation at a particular site passes the dominance test (using the 50/20 rule), the hydrophytic vegetation criterion is considered fulfilled. If it fails the dominance test, and positive indicators of hydric soils and/or wetland hydrology are present, it is necessary to apply the prevalence index. The prevalence index is a weighted-average wetland indicator status of all plant species at a test site, where each indicator status category is given a numeric code and weighting by percent cover (USACE 2008). If a prevalence index is 3.0 or less, the hydrophytic vegetation criterion is considered fulfilled.

If a site fails the prevalence index and positive indicators of hydric soils and/or wetland hydrology are present, it is necessary to assess the presence or absence of morphological adaptations. To apply this indicator, morphological features must be observed on more than 50 percent of the individuals of a FACU species living in an area where indicators of hydric soil and wetland hydrology are present (USACE 2008). Once this indicator is applied, the dominance test and/or the prevalence index are/is recalculated using a FAC indicator status of this species (USACE 2008).

3.1.3.2 Hydric Soils

A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (USACE 1987). Hydric soil indicators are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds (USACE 2008). The hydric soil criterion is considered fulfilled at a location if soils in the area can be inferred to have a high groundwater table, evidence of prolonged soil saturation, or any indicators suggesting a long-term reducing environment in the upper 18 inches of the soil profile.

Sample points were selected within potential wetland areas and where the apparent boundary between wetland and upland was inferred based on changes in the

composition of the vegetation and topography. Soil pits were dug to a depth of at least 18 inches or to a depth necessary to determine soil color, evidence of soil saturation, depth to groundwater, and indicators of a reducing soil environment (i.e., mottling, gleying, and sulfidic odor).

Hydric soil indicators are presented in three groups in the Arid Supplement (USACE 2008) “all soils,” “sandy soils,” and “loamy and clayey soils.” Indicators applicable to all soil textures are indicated as A1 through A10 on the datasheet and include histosols, histic epipedon, stratified layers, and muck, among others. Indicators in sandy soils are noted as S1 through S6 and include sandy gleyed matrix, sandy redox, and stripped matrix. F1 (loamy mucky mineral) through F9 (vernal pools) are indicators of hydric conditions within loamy and clayey soils. A complete description of each of the hydric soil indicators is provided in the 2008 Arid Supplement and should be referenced during each delineation.

3.1.3.3 Wetland Hydrology

The presence of wetland hydrology indicators confirm that inundation or saturation has occurred on a site, but may not provide information about the timing, duration, or frequency of the event. Hydrology features are generally the most ephemeral of the three wetland parameters (USACE 2008).

In the 2008 Arid Supplement, wetland hydrology indicators are divided into four groups. Those that are determined based on direct observation are in Group A. These include the presence of surface water, a high water table, and saturation. Water marks, drift deposits, surface soil cracks, and other indicators of flooding or ponding fall within Group B. Group C consists of indicators that provide indirect evidence that a site was saturated recently, such as the presence of sulfidic odors or oxidized rhizospheres along living roots. Finally, Group D consists of vegetation and soil features that indicate recent wet conditions such as the FAC-neutral test or a shallow aquitard (USACE 2008). These indicators are further classified as primary or secondary indicators.

Hydrologic information for the site was obtained by reviewing USGS topographic maps and by directly observing hydrology indicators in the field. The wetland hydrology criterion is considered fulfilled at a location if, based upon the conclusions inferred from the field observations, an area has a high probability of being periodically inundated or has soils saturated to the surface at some time during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (USACE 1987). If at least one primary indicator or at least two secondary indicators are found at a sample point, the wetland hydrology criterion is considered fulfilled.

3.1.4 Non-wetland Jurisdictional Waters

The USACE requires the delineation also of non-wetland jurisdictional waters. These waters must have strong hydrology indicators such as the presence of seasonal flows and an ordinary high watermark. An ordinary high watermark is defined as:

> . . . that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 CFR Part 328.3).

Areas delineated as non-wetland jurisdictional waters may lack wetland vegetation or hydric soil characteristics. Hydric soil indicators may be missing, because topographic position precludes ponding and subsequent development of hydric soils. Absence of wetland vegetation can result from frequent scouring due to rapid water flow. These types of jurisdictional waters are delineated by the lateral and upstream/downstream extent of the ordinary high watermark of the particular drainage or depression.

3.1.5 Atypical Situations

The definition of a wetland includes the phrase “under normal circumstances” because there are situations in which the vegetation of a wetland has been removed or altered because of recent natural events or human activities (USACE 1987).

To describe these conditions, USACE uses definitions for atypical situations and problem areas. They are as follows:

> Atypical situation: . . . refers to areas in which one or more parameters (vegetation, soil, and/or hydrology) have been sufficiently altered by recent human activities or natural events to preclude the presence of wetland indicators of the parameter (USACE 1987).
>
> Problem areas: . . . wetland types in which wetland indicators of one or more parameters may be periodically lacking due to normal seasonal or annual variations in environmental conditions that result from causes other than human activities or catastrophic natural events. Representative examples of problem areas include seasonal wetlands, wetlands on drumlins, prairie potholes, and vegetated flats (USACE 1987).

Atypical situations and problem areas may lack one or more of the three criteria and still be considered wetlands if background information on the previous condition of the area and field observations indicate that the missing wetland criteria were present before the

disturbance and would occur at the site under normal circumstances. Additional delineation procedures would be employed, if normal circumstances did not occur on a site.

3.2 CDFG and RWQCB

Under sections 1600–1607 of the Fish and Game Code, CDFG regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFG has jurisdiction over riparian habitats (e.g., southern willow scrub) associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider.

RWQCB is the regional agency responsible for protecting water quality in California. The jurisdiction of this agency includes all waters of the state and all waters of the United States as mandated by both the federal CWA and the California Porter-Cologne Water Quality Control Act. State waters are all waters that meet one of three criteria (hydrology, hydric soils, or wetland vegetation), and generally include but are not limited to, all waters under the jurisdiction of USACE and CDFG.

3.3 County of San Diego

According to the County RPO (County of San Diego 2007), wetlands are:

1. *Lands having one or more of the following attributes are "wetlands"*:

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

   (bb). The substratum is predominantly undrained hydric soil: or

   (cc). An ephemeral or perennial stream is present, whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

2. *Notwithstanding paragraph (1) above, the following shall not be considered "wetlands"*:

   (aa). Lands which have attribute(s) specified in paragraph (1) solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Directo of Planning and Land Use determines that they:

      (i) Have negligible biological function or value as wetlands;

(ii) Are small and geopraphically isolated from other wetland systems;

(iii) Are not vernal pools; and,

(iv) Do not have substantial or locally important populations of wetland dependent sensitive species.

(bb). Lands that have been degraded by past legal land disturbance activities, to the point that they meet the following criteria as determined by the Director of Planning and Land Use:

(i) Have negligible biological function or value as wetlands even if restored to the extent feasible; and,

(ii) Do not have substantial or locally important populations of wetland dependent sensitive species.

4.0 Results of Field Data

A description of the hydrophytic vegetation units observed, soil types encountered, and a discussion of the local hydrology in the survey area are presented below. Copies of the field data forms summarizing information collected in the field on vegetation, soils, and hydrology observed at each sample site are provided in Attachment 1.

4.1 Vegetation

Eighteen vegetation communities occur on the property, with some vegetation communities also having disturbed categories. The acreages of the habitats and vegetation communities present in the survey area are summarized in Table 1 and shown on Figure 4.

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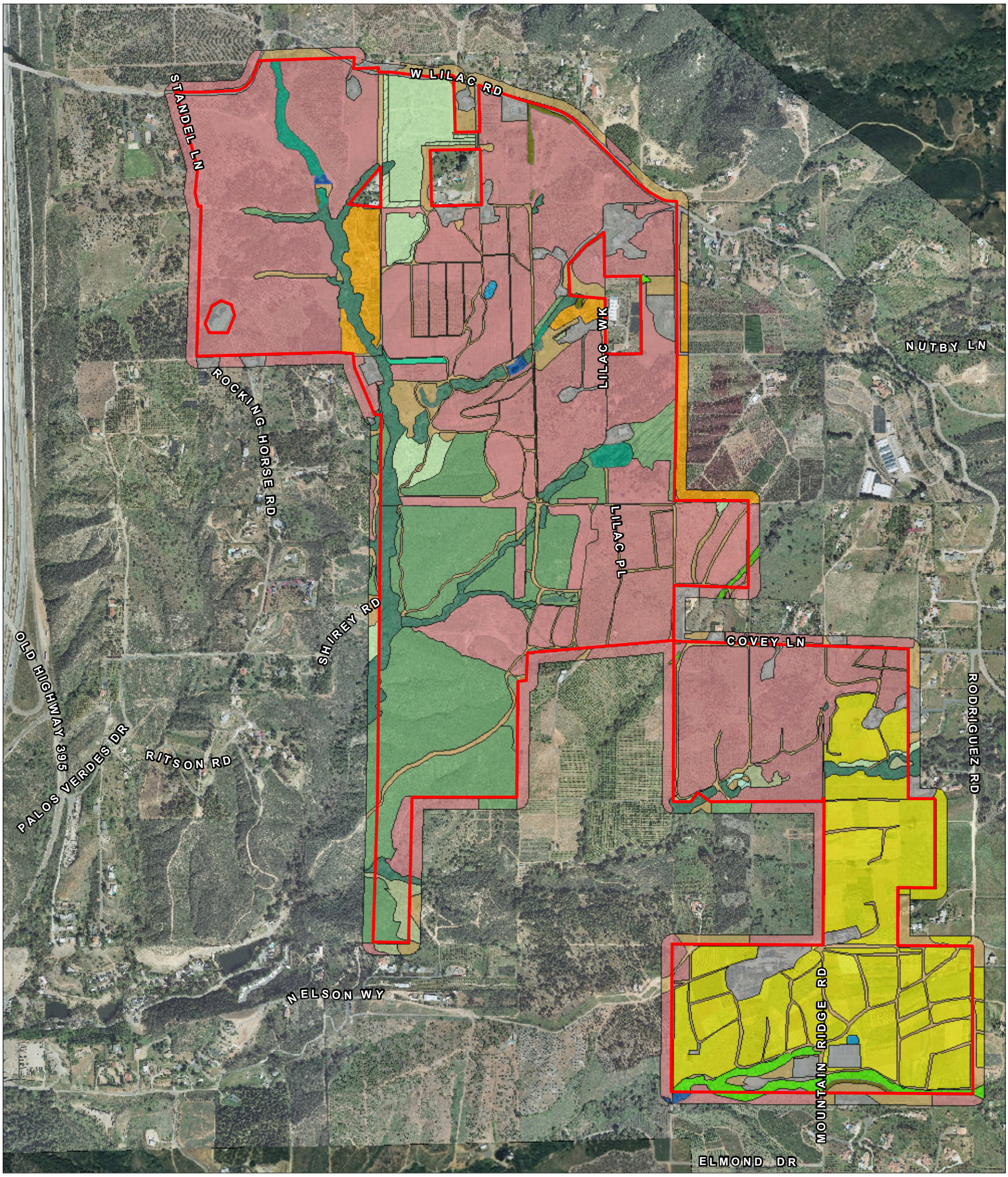

Project Boundary

Vegetation Communities and Landcover Type

- Coastal Sage Scrub (32520)
- Disturbed Coastal Sage Scrub (32520)
- Southern Mixed Chaparral (37120)
- Disturbed Southern Mixed Chaparral (37120)
- Coast Live Oak Woodland (71160)
- Eucalyptus Woodland (79100)
- Southern Willow Scrub (63320)
- Disturbed Southern Willow Scrub (63320)
- Southern Coast Live Oak Riparian Woodland (61310)
- Dist. Southern Coast Live Oak Riparian Woodland (61310)
- Southern Willow Riparian Woodland (62500)
- Coastal/Valley Freshwater Marsh (52410)
- Disturbed Coastal/Valley Freshwater Marsh (52410)
- Mule Fat Scrub (63310)
- Disturbed Wetland (11200)
- Open Water - Fresh water (64140)
- Open Water - Fresh water Agricultue pond (64140)
- Disturbed Habitat (11300)
- Extensive Agriculture - Row Crops (18320)
- Intensive Agriculture - Nursery (18200)
- Orchard (18100)
- Vinyard (18100)
- Developed (12000)

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FIGURE 4

Vegetation Communities and Land Cover Types

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TABLE 1
EXISTING HABITAT / VEGETATION COMMUNITIES

Habitat / Vegetation Communities	Acres
Coast live oak woodland (71160)	3.58
Coastal sage scrub (32520)	18.74
Disturbed Coastal sage scrub (32520)	2.80
Disturbed Coastal/Valley freshwater marsh (52410)	0.59
Eucalyptus woodland (79100)	1.64
Southern coast live oak riparian woodland (61310)	22.85
Disturbed Southern coast live oak riparian woodland (61310)	1.94
Southern mixed chaparral (37120)	76.40
Disturbed Southern mixed chaparral (37120)	6.13
Southern willow riparian woodland (62500)	4.74
Southern willow scrub (63320)	6.14
Disturbed Southern willow scrub (63320)	0.28
Mule fat scrub (63310)	0.06
Open water – fresh water (64140)	0.46
Disturbed wetland (11200)	0.35
Extensive agriculture – row crops (18320)	91.15
Intensive agriculture – nursery (18200)	9.59
Vineyard (18100)	0.66
Orchard (18100)	292.57
Disturbed habitat (11300)	43.42
Developed (12000)	26.67
Total	610.76

4.1.1 Areas with Hydrophytic Vegetation

The following vegetation communities contain plant species that are considered hydrophytic vegetation: coastal/Valley freshwater marsh, southern coast live oak riparian woodland, southern willow scrub, and disturbed wetland. These vegetation communities are dominated by plant species that have a wetland indicator status of obligate, facultative-wet, or facultative species.

4.1.2 Areas Lacking Hydrophytic Vegetation

Habitats and vegetation communities present on-site that lack hydrophytic vegetation include coast live oak woodland, coastal sage scrub, eucalyptus woodland, non-native grassland, southern mixed chaparral, extensive agriculture - row crops, intensive agriculture – nursery, vineyard, orchard, disturbed habitat, and developed land. These habitats and vegetation communities are dominated by upland plant species.

4.2 Soils

Information on the soil types sampled in the survey area is summarized from the Soil Survey for San Diego County (U.S. Department of Agriculture [USDA] 1973), the San Diego Association of Governments' 1995 geographic information system data, and the Hydric Soils of California list obtained from the Natural Resource Conservation Service (1995).

Three soil types were encountered at sample points on the property and are described below according to the classifications from the USDA characterizations of soil types in the County (USDA 1973).

- Cienaba coarse sandy loam, 15 – 30 and 30 – 65 percent slopes (CIE2, CIG2), belong to a series of soils that are excessively drained very shallow to shallow coarse sandy loams that developed from material weathered in place from granitic rock. Cienaba coarse sandy loams are moderate to steep sloping, and therefore have a medium to rapid runoff and moderate to high erosion hazard.

- Fallbrook sandy loam, 15 – 30 percent slopes (FaE2), consists of well-drained, moderately deep to deep sandy loams developed in material weathered in place from granodiorite. The moderately steep slopes that contain this soil on-site have medium to rapid runoff and moderate to high erosion hazard.

- Steep gullied land (StG) consists of sloping to steep land areas that are actively undergoing erosion into old alluvium or decomposed rock. Gullies of various sizes are common within this soil series. Runoff is very rapid and the erosion hazard very high.

Hydric soil indicators observed at sample points within wetland areas included depleted matrix (i.e., presence of mottles, low chroma colors) and hydrogen sulfide odor.

4.3 Hydrology

The project area contains a number of drainages that flow from the north and east towards the southwestern portion of the site. The water flows off-site through a series of man-made ponds within a development and then southward to join Moosa Creek to the east of Interstate 15. Moosa Creek flows in a westerly direction, where it converges with the San Luis Rey River.

The source of the water that flows in the drainages on the site comes from seasonal storm water runoff and urban/agricultural runoff. The flow regime of the drainages on-site is either intermittent or ephemeral, depending on the particular drainage. Hydrology indicators commonly observed in wetland areas included one or more of the following: surface water, high water table, saturation, water marks, riverine drift lines, or sediment deposits.

5.0 Location of Jurisdictional Waters

Jurisdictional waters were delineated on-site according to USACE, CDFG/RWQCB, and County regulations. Acreages of jurisdictional waters for each of the different jurisdictions are provided in Table 2. Figures 5a,b, 6a,b, and 7a,b show the locations of the jurisdictional waters identified on-site for each agency jurisdiction.

TABLE 2
EXISTING JURISDICTIONAL WATERS WITHIN THE PROJECT AREA
(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 Jurisdiction[1]	**43.52**
County of San Diego RPO Wetlands	**42.88**

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

5.1 USACE Jurisdictional Waters

USACE jurisdictional waters on the site include both wetland and non-wetland waters. These waters of the U.S. are discussed below.

5.1.1 Non-wetland Waters of the U.S.

A total of 4.69 acres of non-wetland waters of the U.S. considered to fall within USACE jurisdiction were delineated on-site (see Figures 5a and b). Jurisdictional non-wetland waters on the site include the upland vegetated ephemeral drainages that are tributary to the larger drainage courses in the project area. These non-wetland drainage courses lack hydrophytic vegetation, hydric soils, and/or wetland hydrology, but convey runoff

that supports wetlands in the main drainage courses. The lateral extent of the non-wetland waters was determined by the observable ordinary high water mark.

The presence of an ordinary high watermark and a connection to the larger drainage courses that support wetland were used to determine the jurisdictional status of each of the drainages. The acreage for these waters of the U.S. was determined by multiplying the lateral extent of the ordinary high watermarks at selected locations by the length of the drainage channel.

5.1.2 Wetland Waters of the U.S.

Portions of the southern coast live oak riparian woodlands, southern willow scrub, and freshwater marsh areas along the drainage courses on the site satisfy the three parameter criteria for USACE wetlands. Wetland waters of the U.S. on-site include all wetlands within the ordinary high water mark and all wetlands that are adjacent to it. A total of 13.44 acres of wetland waters of the U.S. were delineated on-site (see Figures 5a and b).

5.2 CDFG/RWQCB Waters of the State

State waters under the jurisdiction CDFG/RWQCB on-site include both unvegetated or upland vegetated streambeds and wetlands (see Figures 6a and b). Streambeds delineated on-site include the ephemeral drainages that drain into the larger drainage courses, and total 4.18 acres. State wetlands on-site include all of the southern coast live oak riparian woodlands, southern willow scrub, and freshwater marsh areas along the drainage courses, and total 39.35 acres.

5.3 County of San Diego RPO Wetlands

County RPO wetlands on-site include all areas of southern coast live oak riparian woodlands, southern willow scrub, and freshwater marsh areas along the drainage courses and most of the streambeds (see Figures 7a and b). Some streambeds on-site were not considered County RPO wetlands due to the low wetland values of degraded portions of these drainage courses that lie within heavily used agricultural areas. The total County RPO wetlands delineated on-site total 42.88 acres.

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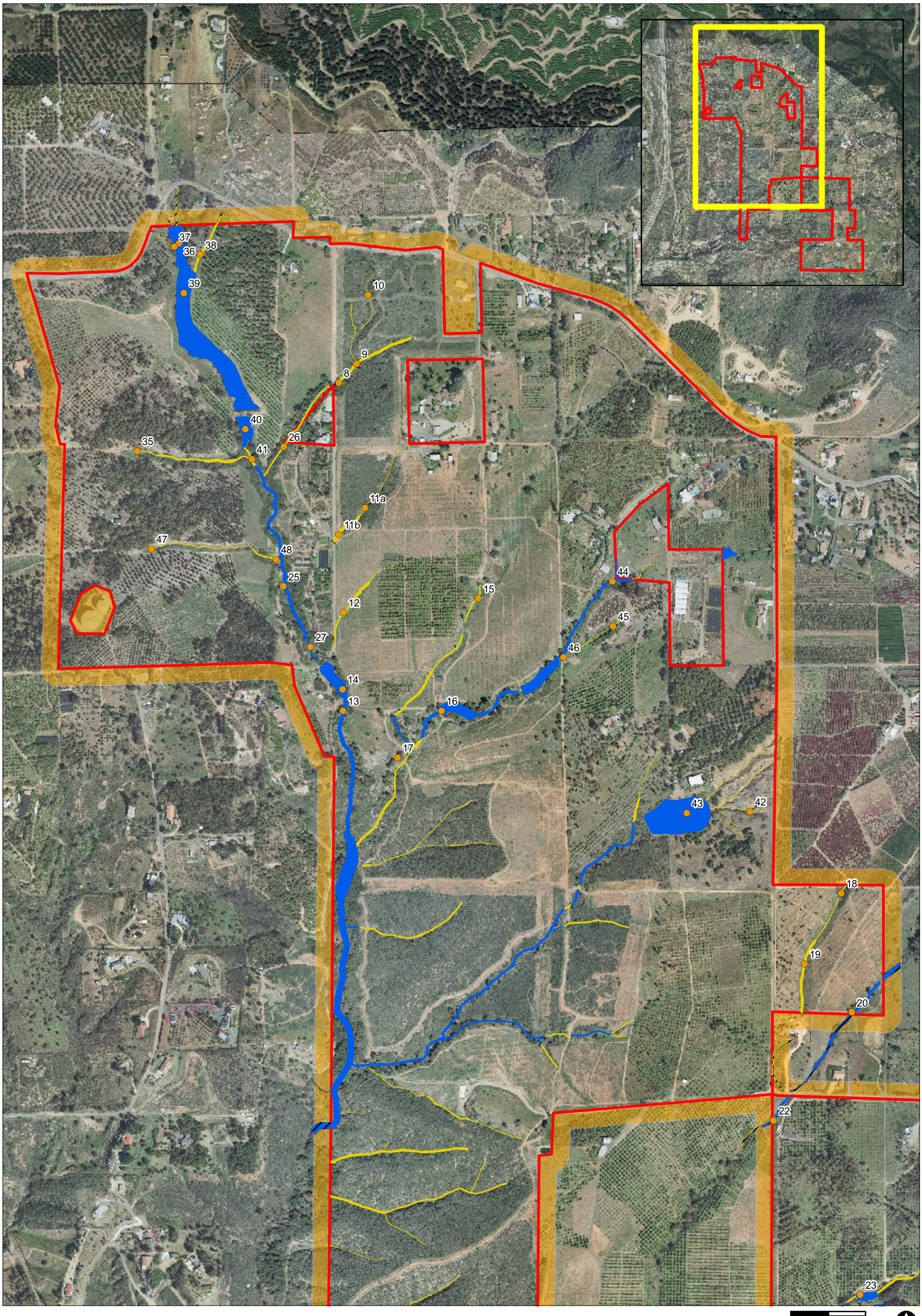

Project Boundary
100-ft. Survey Buffer
Delineation Sample Point
Wetland
Wetland (offsite)
Non-wetland water
Non-wetland water (off)

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FIGURE 5a

Location of USACE Waters of the U.S.

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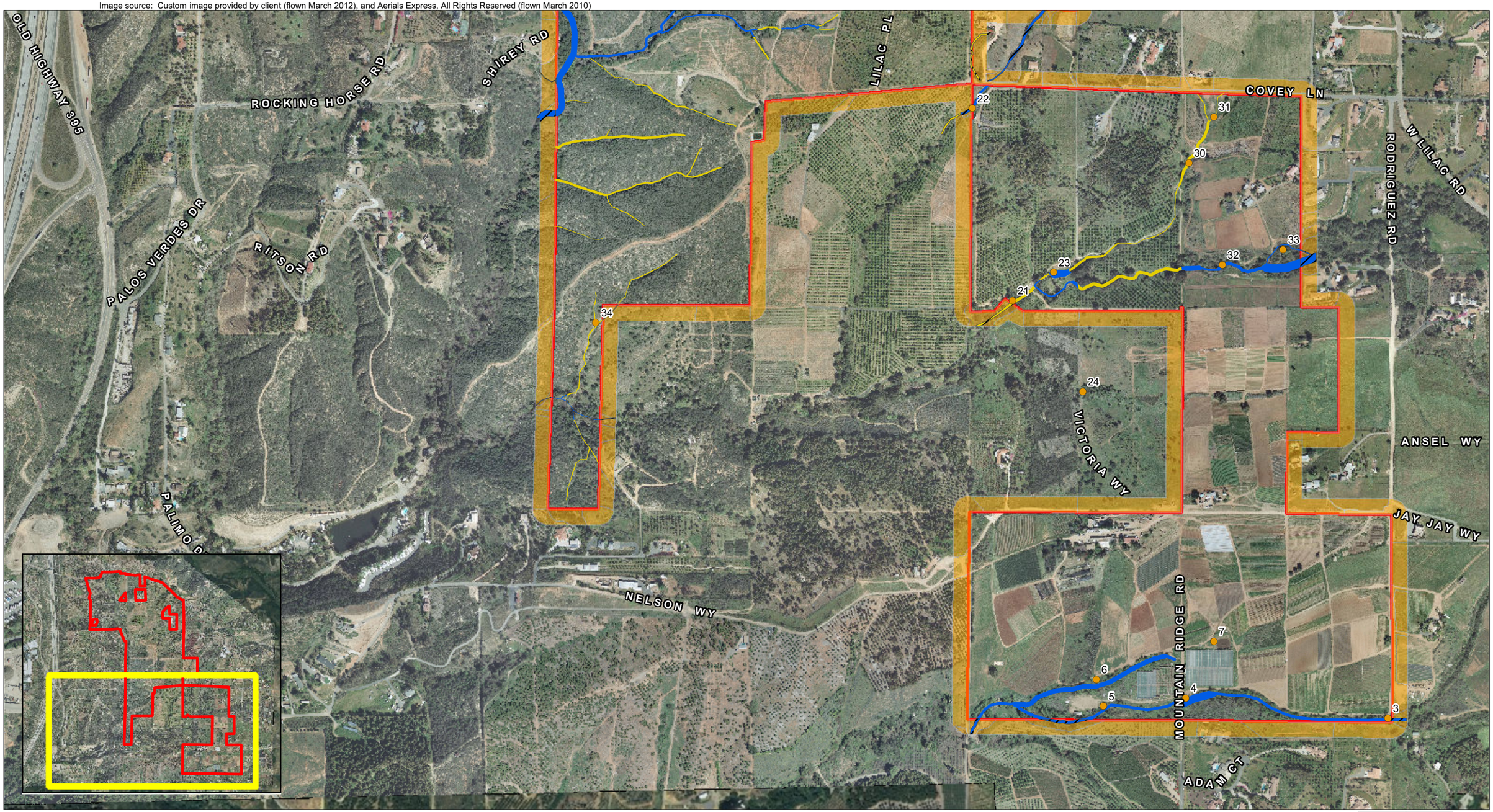

Project Boundary
100-ft. Survey Buffer
Delineation Sample Point
Wetland
Wetland (offsite)
Non-wetland water
Non-wetland water (off)

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FIGURE 5b

Location of USACE Waters of the U.S.

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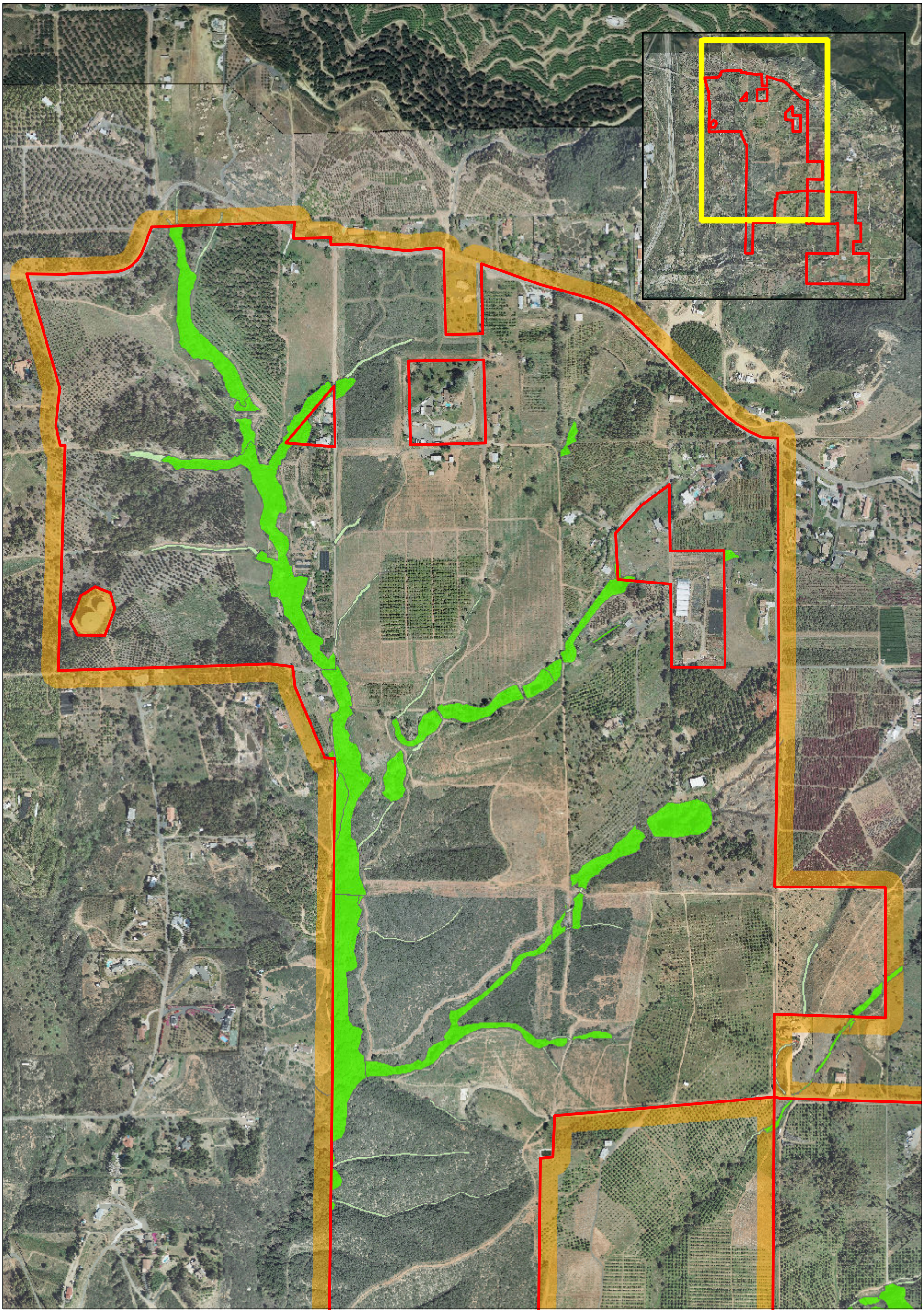

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FIGURE 6a

Location of CDFG/RWQCB State Waters

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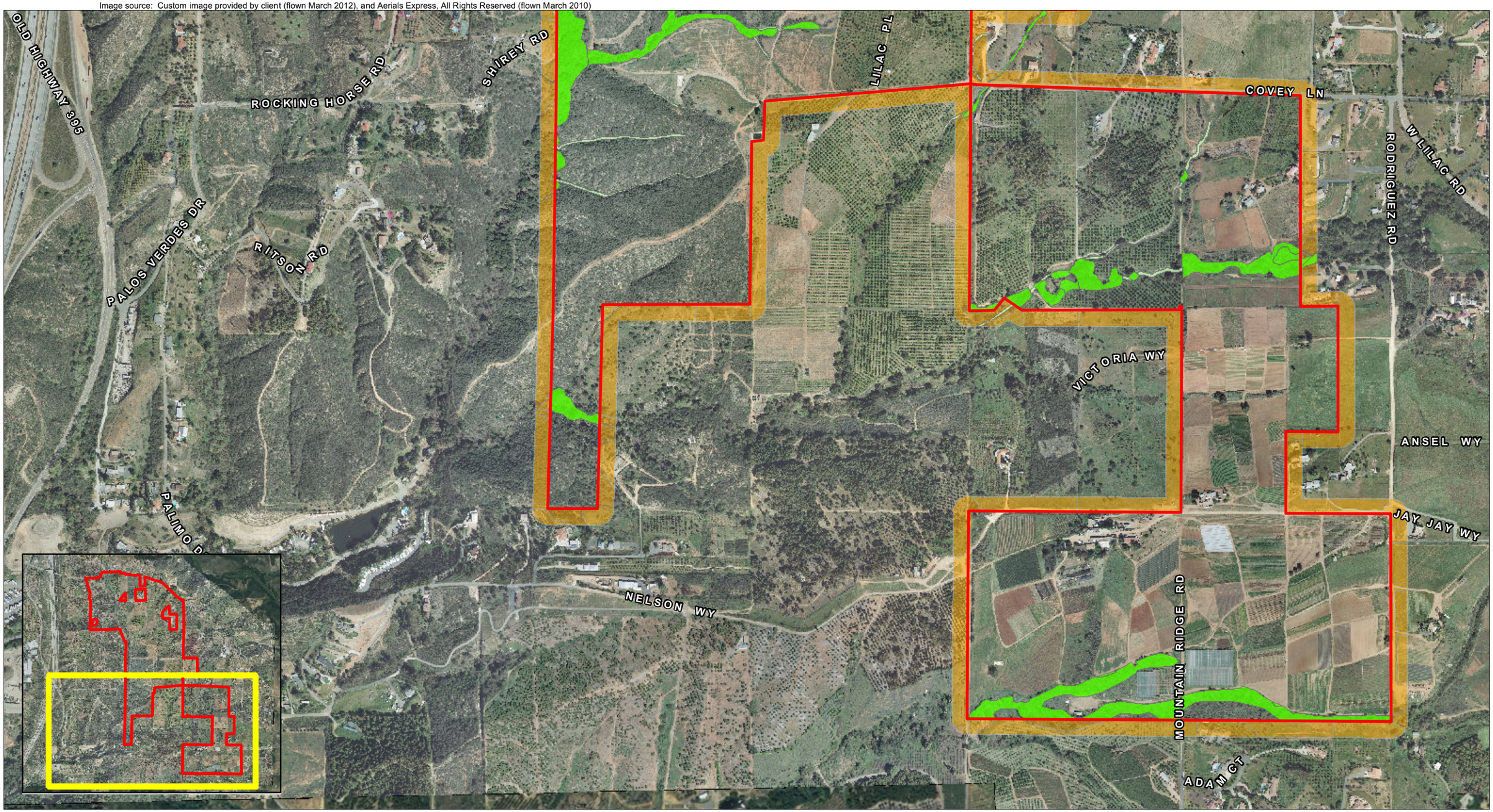

Project Boundary
100-ft. Survey Buffer
Wetland
Wetland - Off-site
Streambed
Streambed - Off-site

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FIGURE 6b

Location of CDFG/RWQCB State Waters

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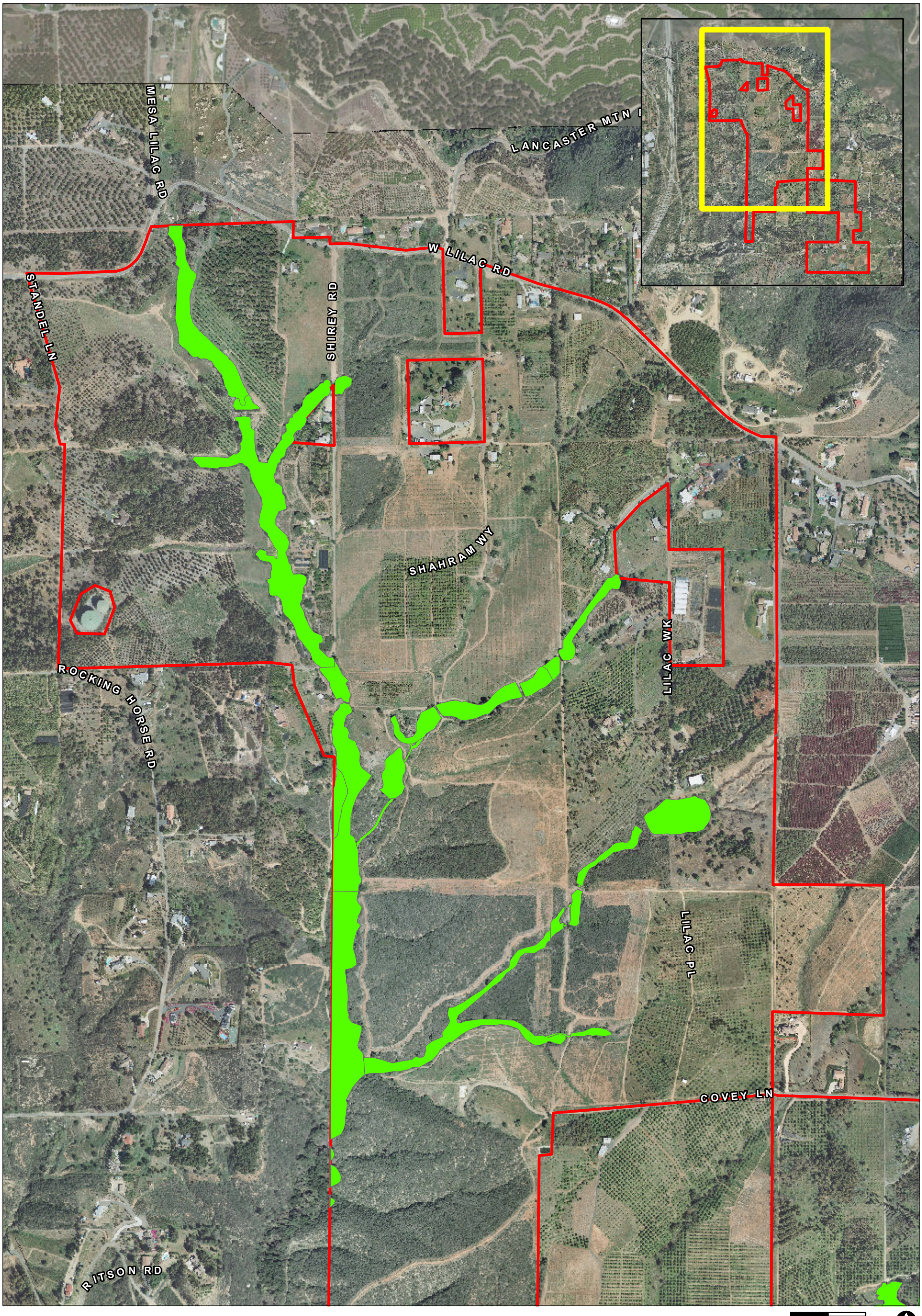

Project Boundary

County RPO Wetland

County RPO Wetland - Off-site

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FIGURE 7a

Location of County of San Diego RPO Wetlands

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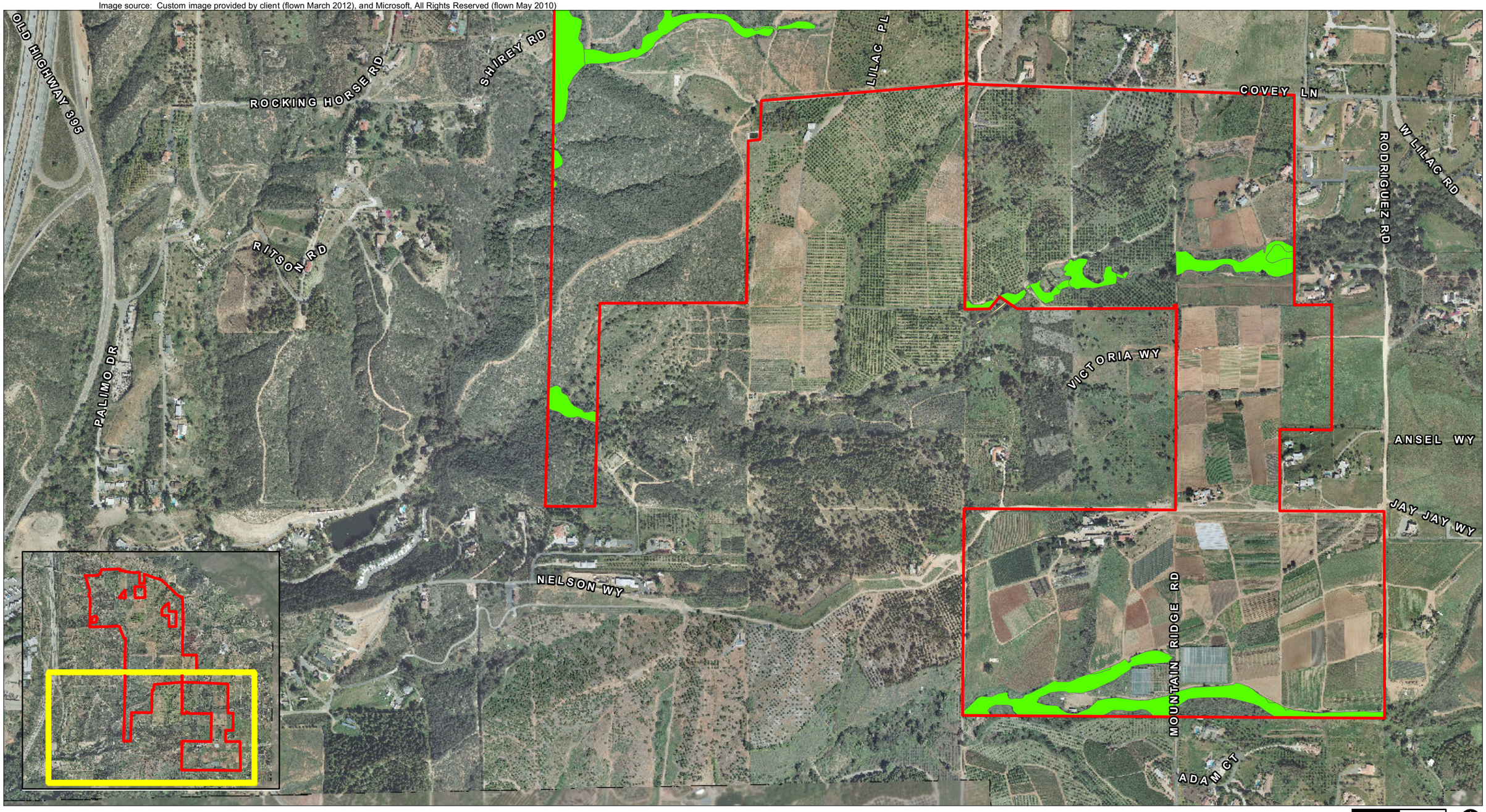

Project Boundary

County RPO Wetland

County RPO Wetland - Off-site

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FIGURE 7b

Location of County of San Diego RPO Wetlands

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6.0 Regulatory Issues

Due to a no-net-loss policy implemented by the resource agencies, the first consideration in project planning should be avoidance of jurisdictional waters. USACE, CDFG, RWQCB, and County jurisdictional waters are regulated by the federal, state, and local government, and all impacts are considered significant and need to be avoided to the greatest extent possible.

Unavoidable impacts to jurisdictional waters may be authorized by USACE, CDFG, and RWQCB through permit authorizations from USACE (Section 404 permit program), from CDFG through a 1602 Streambed Alteration Agreement, and from RWQCB through a 401 State Water Quality Certification. In addition, the County only allows impacts to wetlands that meet the special conditions of the RPO. Approved impacts to USACE, CDFG, RWQCB, and County jurisdictional waters require mitigation through habitat creation, enhancement, and/or preservation to achieve a no net loss of jurisdictional waters, as determined by a qualified restoration specialist in consultation with the regulatory agencies. In addition, regulatory agencies require that a buffer be maintained between jurisdictional waters/wetlands and any development.

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ATTACHMENT 1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 2/25/11

Applicant/Owner: Accretive State: CA Sampling Point: (1)

Investigator(s): G. Schaid; B. McKinney Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope (%): 0 - 2%

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

Soil Map Unit Name: Steep Gullied land / Cieneba coarse sandy loam NWI classification:

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

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

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	90%	Yes	FACW
2. Populus fremontii	2%	No	FACW
3.			
4.			
	92% = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Baccharis salicifolia	5%	Yes	FACW
2.			
3.			
4.			
5.			
	5% = Total Cover		
Herb Stratum (Plot size: ____)			
1. Silybum (milk thistle) (Carduus sp.)	3%	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	3% = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 6 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-19"	10YR3/2	95	5YR6/8	5%			Sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Organic streaking; 0-2in. organic layer

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes X No ___ Depth (inches): 8"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0"

Wetland Hydrology Present? Yes X No ___

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

Remarks: Sheet flow; No discernable low flow channel; Flat broad alluvium

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: SD County Sampling Date: 2/25/11

Applicant/Owner: Accretive State: CA Sampling Point: 2

Investigator(s): G. Scheid, E. McKinney Section, Township, Range:

Landform (hillslope, terrace, etc.): gully bottom Local relief (concave, convex, none): Concave Slope (%): 0-5%

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

Soil Map Unit Name: Steep Gullied Land / Cieneba coarse sandy loam NWI classification:

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Vegetation recovering from clearing (for fuel management?)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Brassica nigra	90%	yes	UPL
2. Silybum (milk thistle)	8%	No	UPL
3. Phacelia sp.	2%	No	UPL
4.			
5.			
6.			
7.			
8.			
	100% = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No X

Remarks: Narrow gully; small watershed.

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR3/3	100%					Sandy Loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: ~~Roots~~ No hydric soil indicators observed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks: gully w/ small watershed; NON-wetland water/stream bed 3-5 ft wide ALOE COFG

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: La Lilas City/County: San Diego County Sampling Date: 2/25/11

Applicant/Owner: Accretive State: CA Sampling Point: 3

Investigator(s): G. Scheid · E. McKinney Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): none Slope (%): 0 - 2%

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

Soil Map Unit Name: Steep Gullied land / Cieneba coarse sandy loam NWI classification:

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

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

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	70%	Yes	FACW
2. Salix lasiolepis	20%	Yes	FACW
3.			
4.			
	90% = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Baccharis salicifolia	8%	Yes	FACW
2.			
3.			
4.			
5.			
	8% = Total Cover		
Herb Stratum (Plot size:)			
1. Mimulus guttatus			
2. Rorippa curvisiliqua	2%	Yes	OBL
3. Nasturtium			
4.			
5.			
6.			
7.			
8.			
	2% = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 6 % Cover of Biotic Crust 6

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	98%					Sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Sandy loam w/ organic streaking

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 3"

Water Table Present? Yes X No ___ Depth (inches): 6"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0"

Wetland Hydrology Present? Yes X No ___

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

Remarks: Location in low flow channel of drainage; Intermittent ag. flows.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 2/25/11

Applicant/Owner: Accretive State: CA Sampling Point: 4

Investigator(s): G. Schmidt, E. McKinney Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): Concave Slope (%): 2

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

Soil Map Unit Name: Steep Gullied Land / Cieneba coarse sandy loam NWI classification:

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

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

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Vegetation cleared; Area a disturbed wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. none			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Rumex crispus	10%	No	FACW
2. Raphanus Sativa	5%	Yes	UPL
3. Conium maculatum	2	No	FAC
4. mild thistle (Carduus sp.)	2	No	UPL
5.			
6.			
7.			
8.			
	99 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 3 % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	x 1 =	____
FACW species	12	x 2 =	24
FAC species	____	x 3 =	____
FACU species	____	x 4 =	____
UPL species	87	x 5 =	435
Column Totals:	99 (A)		459 (B)

Prevalence Index = B/A = 4.6

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	100%					Loamy clay	
8-18	10YR 3/2	100%					Sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 3"

Water Table Present? Yes X No ___ Depth (inches): 6"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0-2"

Wetland Hydrology Present? Yes X No ___

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

Remarks: Surface water in low flow channel

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 2/25/11

Applicant/Owner: Accretive State: CA Sampling Point: 5

Investigator(s): G. Scheid Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): Concave Slope (%): 2

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

Soil Map Unit Name: Steep Gullied Land / Fallbrook sandy loam NWI classification:

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

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

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Area on terrace above Oltwm. Riparian vegetation

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	50%	yes	FACW
2.			
3.			
4.			
	50%	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. Baccharis salicifolia	10%	yes	FACW
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size:)			
1. Raphanus sativus	10%	yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10%	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2							

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: No hydric soils observed in indicative

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks: Riparian terrace, COFG; Sample located above OHWM.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Valley Center 6153 City/County: San Diego County Sampling Date: 2/25/11

Applicant/Owner: Accretive State: CA Sampling Point: 6

Investigator(s): AJB, GAS, EJM Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): Concave Slope (%): 0

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

Soil Map Unit Name: Steep Gullied Land / Fallbrook sandy loam NWI classification:

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

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

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Site on a floodplain terrace above OHWM.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1. Salix lasiolepis	80	yes	FACW
2.			
3.			
4.			
	80 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Baccharis salicifolia	5	yes	FACW
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Raphanus sativus	15	yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	15 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks: Vegetation growing on terrace above OHWM.

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3-3	100					loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: No hydric soil indicators observed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks: No hydrology indicators observed. Terrace above ordinary high water mark.

Riparian: CDFG

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 6153 Valley Center City/County: San Diego County Sampling Date: 2/25/11

Applicant/Owner: Accenture State: CA Sampling Point: 7

Investigator(s): AJB, GAS, EJM Section, Township, Range:

Landform (hillslope, terrace, etc.): pond Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): 2 RRC Lat: Long: Datum:

Soil Map Unit Name: Steep Gullied Land / Cieneba coarse sandy loam NWI classification:

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Tamarix ramosissima	80	yes	FAC
2. Salix laevigata	2	No	FACW
3.			
4.			
	82 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Baccharis salicifolia	5	yes	FACW
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size:)			
1. Bromus diandrus	13	yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	13 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks: Vegetation in small ring around upper bank of sg. pond.

SOIL

Sampling Point: 7

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/3	98	5YR 4/6	2	RM	M	Sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes (X) No ___ (7 → X)

Remarks: dug ~4ft from edge of pond; False positive due to questionable soil origin.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ___ No X

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

Remarks: open water pond. Habitat is adjacent above OHWM.

Possibly exempt from CDFG/ACOE = Ag. pond?

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 3/1/11

Applicant/Owner: Accretive State: CA Sampling Point: 8

Investigator(s): G. Schmid Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope drainage Local relief (concave, convex, none): Concave Slope (%): 0-2

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

Soil Map Unit Name: Steep Gullied Land / Fallbrook Sandy Loam NWI classification:

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

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

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	90	yes	UPL
2.			
3.			
4.			
	90 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Eriogonum sp.	1	yes	UPL
2. Baccharis pilularis	2	yes	UPL
3.			
4.			
5.			
	3 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Marah macrocarpus	2	yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	2 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 2	x 2 = 4
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 93	x 5 = 465
Column Totals: 95 (A)	469 (B)

Prevalence Index = B/A = 4.9

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR3/3	100	—	—			Sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: None observed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? * Yes X No ___ Depth (inches): 3"

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

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

Wetland Hydrology Present? Yes ___ No X

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

Remarks: Sample pit along adjacent to low flow in oak riparian area. False positive for hydrology due to recent rain event. Area void of OFO riparian. Low flow channel approx. - 10ft

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 3/1/11
Applicant/Owner: Accretive State: CA Sampling Point: 9
Investigator(s): G. Scheid Section, Township, Range:
Landform (hillslope, terrace, etc.): hillslope drainage Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Steep Gullied Land / Fallbrook Sandy Loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes V No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	15%	Yes	FACW
2.			
3.			
4.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. Salix laevigata	5	No	FACW
2. Baccharis pilularis	80	Yes	UPL
3.			
4.			
5.			
	85	= Total Cover	
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 20	x 2 =	40
FAC species	x 3 =	
FACU species	x 4 =	
UPL species 80	x 5 =	400
Column Totals: 100 (A)		440 (B)

Prevalence Index = B/A = 4.4

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sampling Point: 9

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/6	100					Sandy	
	7.5YR 3/4							
10-12	10YR 3/3	100					Loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: High water table and saturation due to recent rains (3 days since 2" rain) may

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? * Yes X No ___ Depth (inches): 2"

Water Table Present? * Yes X No ___ Depth (inches): 8"

Saturation Present? * Yes X No ___ Depth (inches): 0-2"
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

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

Remarks: Sample point next to low flow channel; False positive for hydrology due to recent rain event.
CDFG Riparian; ROW Node 15 ft wide

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Mallard Center City/County: San Diego County Sampling Date: 3/1/11

Applicant/Owner: AIB, GAS, EJM, Accretive State: CA Sampling Point: 10

Investigator(s): Section, Township, Range:

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

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

Soil Map Unit Name: Steep Gullied Land / Fallbrook sandy loam NWI classification:

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

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

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Yucca schidigera	2	No	UPL
2. Artemisia californica	33	Yes	UPL
3. Mimulus aurenticus	5	No	UPL
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Italian thistle (Carduus sp.)	40	Yes	UPL
2. Bromus madritensis rubens	10	No	UPL
3. Claytonia sp.	3	No	UPL
4. Hirschfeldia sp	1	No	UPL
5. Paeonia californica	1	No	UPL
6.			
7.			
8.			
	55 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. Lonicera subspicata	5	Yes	UPL
2.			
	5 = Total Cover		

% Bare Ground in Herb Stratum Ø % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Non-wetland water w/in Coastal sage scrub Vegetation.
Bank to bank 45 ft

SOIL

Sampling Point: 10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3-4	100					Sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Soils are moist from recent rain

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks: No hydrology present; Ephemeral drainage in upland. ^ indicators

ACOE – non-wetland water

CDFG – Streambed

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 3/1/11

Applicant/Owner: Accretive State: CA Sampling Point: 11a

Investigator(s): G. Scheid Section, Township, Range:

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

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

Soil Map Unit Name: Steep but Leid Land / Fallbrook sandy loam NWI classification:

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

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

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Artemisia californica	60%	yes	UPL
2. Salvia mellifera	20%	yes	UPL
3. Heteromeles arbutifolia	20%	yes	UPL
4.			
5.			
	100% = Total Cover		
Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: gully in upland CSS

SOIL

Sampling Point: 11a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR 3/3	100%					Sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: None observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks: No hydrology indicators observed. Ephemeral drainage in upland. Low flow 3-5 ft. CDFG streambed ACOE NWW isolated downstream offsite?

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 3/1/11

Applicant/Owner: Accretive State: CA Sampling Point: 116

Investigator(s): G. Scheid Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope drainage Local relief (concave, convex, none): Concave Slope (%): 9

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

Soil Map Unit Name: Steep Gullied Land / Fallbrook sandy loam NWI classification:

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Vegetation at low end of on site portion disturbed/cleared

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	5%	yes	UPL
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Baccharis salicifolia	5%	yes	FACW
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 90% % Cover of Biotic Crust

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 5	x 2 = 10
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 5	x 5 = 25
Column Totals: 10 (A)	35 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Veg cleared; formerly riparian or upland?

SOIL

Sampling Point: 11b

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/3	100%					Coarse sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks: Sheet flow area at bottom of on-site segment of drainage ephemeral. Does not cross streambed. Above DWD — isolated downstream-offsite?

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 3/1/10
Applicant/Owner: Accretive State: CA Sampling Point: 12
Investigator(s): G. Scheid Section, Township, Range:
Landform (hillslope, terrace, etc.): hillslope drainage Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Fallbrook Sandy Loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology ____ significantly disturbed? yes Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Vegetation cleared for agricultural purposes or fuel break?

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	5%	yes	UPL
2.			
3.			
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. None			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: ____)			
1. Bromus diandrus	30	yes	UPL
2. Brassica nigra	5	No	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	35	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 40	x 5 = 200
Column Totals: 40 (A)	200 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 12

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/3	100%					Loamy Sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks: Ephemeral drainage; Dist. due to agricultural operation; Sheet flow

CDFG = streambed ACOE Not (isolated downstream?)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Valley Center City/County: San Diego County Sampling Date: 3/1/11

Applicant/Owner: State: CA Sampling Point: 13

Investigator(s): AIB, GAS, ETM Section, Township, Range:

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

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

Soil Map Unit Name: Fallbrook sandy loam NWI classification:

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Site is disturbed due to invasive palms. Wetland hydrology and hydric soils at this location would support hydrophytic vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Washingtonia robusta	60	Yes	FACW
2. Phoenix canariensis	20	Yes	UPL
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. Washingtonia robusta	15	Yes	FACW
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1. grape (non-native)	5	Yes	UPL
2.			
	5	= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 75	x 2 =	150
FAC species	x 3 =	
FACU species	x 4 =	
UPL species 25	x 5 =	125
Column Totals: 100 (A)		375 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No X

Remarks: interfluvial. Channel ~15 feet away w bank to bank ~6 feet. Natural vegetation disturbed due to invasive palms.

SOIL

Sampling Point: 13

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2-1	94					loam	
0-16			Gley 1 2.5-N	1		M		
5-8			5YR-3-4	5	D	PL		

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Black redox features may be organic material (leaves)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes X No ___ Depth (inches): 12-16

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 8

Wetland Hydrology Present? Yes X No ___

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

Remarks: sheet flows w/ braided streams

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Valley Center City/County: San Diego County Sampling Date: 3/1/11

Applicant/Owner: State: CA Sampling Point: 14

Investigator(s): A.B, G.A.S, E.J.M Section, Township, Range:

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

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

Soil Map Unit Name: Fallbrook sandy loam NWI classification:

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Open area of oak riparian woodland, vegetation disturbed as trees and shrubs removed from this location.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Rorripa nasturtium-aquatica	93	Yes	OBL
2. Celery – Apium graveolens	1	No	FACW
3. Carex sp.	5	No	FACW
4. Sonchus oleraceus	1	No	UPL
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks: Full sun bordered by Oak riparian woodland. Disturbed riparian habitat

SOIL

Sampling Point: 14

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 4-6	100					Sand	
4-16	10YR 2-1	100					loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Black organic matter in 4-16" layer matrix. No redox features observed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 4"

Wetland Hydrology Present? Yes X No ___

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

Remarks: small bivalve shells present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Valley Center City/County: San Diego County Sampling Date: 3/1/11

Applicant/Owner: State: CA Sampling Point: 15

Investigator(s): AJB, GAS, ETM Section, Township, Range:

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

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

Soil Map Unit Name: Steep Gullied Land / Fallbrook Sandy loam NWI classification:

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

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

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

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

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

Remarks: Vegetation supported by Ag runoff?

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Washingtonia robusta	5	yes	FACW
2.			
3.			
4.			
	5 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Dic echioides	80	yes	FAC
2. Carpobrotus edulis	10	No	UPL
3. Bromus diandrus	5	No	UPL
4.			
5.			
6.			
7.			
8.			
	95 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: 15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3-3	100					Sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Hydric soil not present; soils drain rapidly.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks: Soils drain rapidly in this ephemeral drainage; Non-wetland waters ACOE CDFG - riparian?

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Valley Center City/County: San Diego County Sampling Date: 3/1/11

Applicant/Owner: State: CA Sampling Point: 16

Investigator(s): AJB, GAS, EJM Section, Township, Range:

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

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

Soil Map Unit Name: Steep Gullied Land / Fallbrook sandy loam NWI classification:

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Site vegetation disturbed due to presence of pampas grass.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	30	yes	FACW
2. Washingtonia robusta	5	No	FACW
3.			
4.			
	35	= Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1. Typha sp.	50	yes	OBL
2. Juncus acutus	10	No	FACW
3. Cor jubata (pampas grass)	5	No	FAC
4.			
5.			
	65	= Total Cover	

Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
		= Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks: Sample located in oak riparian woodland in pond about road crossing.

SOIL

Sampling Point: 16

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3-1	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 12-16"

Water Table Present? Yes X No ___ Depth (inches): 0

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

Wetland Hydrology Present? Yes X No ___

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

Remarks: Ponding above road crossing

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Valley Center City/County: San Diego County Sampling Date: 3/1/11

Applicant/Owner: _____ State: CA Sampling Point: 17

Investigator(s): AB, GAS, EJM Section, Township, Range: _____

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

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

Soil Map Unit Name: Fallbrook rocky sandy loam NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus engelmannii	45	Yes	UPL
2. Quercus agrifolia	40	Yes	UPL
3.			
4.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Cort gybata (pampas grass)	5	Yes	UPL
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Toxicodendron diversilobum	5	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. Toxicodendron diversilobum	5	Yes	UPL
2.			
	5	= Total Cover	

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Oak riparian

SOIL

Sampling Point: 17

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3							
6-12	5YR 3/3							

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks: Ephemeral drainage at top of steep decline within riparian woodland. ACOE non wetland waters CDFG riparian

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Valley Center City/County: San Diego County Sampling Date: 3/3/11

Applicant/Owner: State: CA Sampling Point: 18

Investigator(s): AIB, GAS, EJM Section, Township, Range:

Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): Concave Slope (%): 0-2

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

Soil Map Unit Name: Steep Gullied Land / Cieneba coarse sandy loam NWI classification:

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

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

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Mal lau (Malosma laurina)	40	yes	UPL
2. Bac pil (Baccharis pilularis)	40	yes	UPL
3.			
4.			
5.			
	80 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Car pyc (Carduus pycnocephalus)	20	yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	20 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	100 = Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species 100	x 5 =	500
Column Totals: 100 (A)		500 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 1B

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 4-4	100					Sand	
4-7	7.5YR 3-3	100					Sandy loam	
7-8	7.5YR 4-4	100					Sand	saturated
8-16	7.5YR 3-2	100					loam	saturated

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes X No ____ Depth (inches): 9

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 5

Wetland Hydrology Present? Yes ____ No X

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

Remarks: Sample pit dug after recent rain in ephemeral drainage in upland vegetation. False positive for hydrology indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lucas City/County: San Diego County Sampling Date: 3/3/11
Applicant/Owner: Accretive State: CA Sampling Point: 1
Investigator(s): G. Schmid Section, Township, Range:
Landform (hillslope, terrace, etc.): gully Local relief (concave, convex, none): Concave Slope (%): 2-5
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Steep badlnd land / Cieneba coarse sandy loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology ____ significantly disturbed? yes Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Vegetation cleared for fuel or agricultural purposes. Probably covered w/ upland vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Malosma laurina	7	yes	UPL
2. Salvia Mellifera	3	yes	UPL
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Bromus diandrus	30	yes	UPL
2. Italian Thistle	30	yes	UPL
3. Bromus madritensis	30	yes	UPL
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum Ø % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: Ø (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: Ø (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Ephemeral drainage course in upland area.

SOIL

Sampling Point: 19

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR 3/3	100%					Sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks: No hydric indicators observed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ___ No X

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

Remarks: Ephemeral drainage 10-15 ft wide. 3-6 ft deep. defined channel below knic pt.; CNFB streambed COE - Navd

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Valley Center City/County: San Diego County Sampling Date: 3/3/11

Applicant/Owner: State: CA Sampling Point: 20

Investigator(s): AIB, GAS, EJM Section, Township, Range:

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0-2

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

Soil Map Unit Name: NWI classification:

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Vegetation disturbed due to agricultural/orchards land clearing

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	2	No	
2. Eucalyptus sp.	2	No	UPL
3. Salix laevigata	10	Yes	FACW
4. Washingtonia robusta	2	No	FACW
	16	= Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1. Bac sal (Baccharis salicifolia)	5	yes	FACW
2. tam ram (Tamarix rammosissima)	5	yes	FAC
3.			
4.			
5.			
	10	= Total Cover	

Herb Stratum (Plot size:)			
1.			
2. Pic ech (Picris echioides)	15	yes	FAC
3. Carex sp. (umbrella sedge)	5	No	FACW
4. Cord jub (Cortaderia jubata)	1	No	UPL
5. Carp edu (Carpobrotus edulis)	20	yes	UPL
6.			
7.			
8.			
	41	= Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: 20

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3-1	100					Sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks: Soils may have been disturbed in this drainage (road installation)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 2

Water Table Present? Yes X No ____ Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks: Hydrology supplemented by agricultural runoff. Main portion of ephemeral drainage.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Valley Center City/County: San Diego County Sampling Date: 3/3/11

Applicant/Owner: State: CA Sampling Point: 21

Investigator(s): AJB, GAS, EJM Section, Township, Range:

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope (%): 0-5

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

Soil Map Unit Name: NWI classification:

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Washingtonia robusta	2		
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Salix lapvigata	1		
2. Arundo donax	1		
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Epilobium ciliatum	1		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. Vitis sp.	2		
2.			
	= Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ____

Remarks:

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 4/4	100					Coarse Sand	
3-6	7.5YR 4/4	100					fine Sand	Saturated
6-10	10YR 3/2	100					Sandy loam	Organic material/saturated
10-12	7.5YR 4/3	100					Sandy loam	Saturated

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 3/3/11
Applicant/Owner: Accretive State: CA Sampling Point: 22
Investigator(s): G. Scheid Section, Township, Range:
Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): Concave Slope (%): 0-2
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Steep Gullied Land NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)
Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Yes Are "Normal Circumstances" present? Yes ____ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Veg. cleared in drainage; Presence of wetland hydrology and hydric soils will support wetland vegetation if not continually disturbed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	20%	Yes	FACW
2.			
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	= Total Cover	
Herb Stratum (Plot size: ____)			
1. Bromus madritensis	10	Yes	UPL
2. Italian Thistle	15	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	= Total Cover	

% Bare Ground in Herb Stratum 55% % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 20	x 2 = 40
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 25	x 5 = 125
Column Totals: 45 (A)	165 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Vegetation altered between property line and road.

SOIL

Sampling Point: 22

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1						Sandy Loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 3"

Water Table Present? Yes X No ____ Depth (inches): 3"

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks: Ephemeral/Intermitten drainage w/ willow
CDFG Riparian (Dist)
ACOE wetland (Dist?)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Valley Center City/County: San Diego County Sampling Date: 3/3/11

Applicant/Owner: State: CA Sampling Point: 23

Investigator(s): AIB, GHS, EJM Section, Township, Range:

Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): Concave Slope (%): 0-2

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

Soil Map Unit Name: NWI classification:

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Vegetation cleared due to agricultural maintenance in adjacent orchard. This location was once a detention basin for the orchards?

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Wash Pob	2	Yes	FACW
2.			
3.			
4.			
	2 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Wash Pob	4	Yes	FACW
2.			
3.			
4.			
5.			
	4 = Total Cover		
Herb Stratum (Plot size:)			
1. Baccharis pilularis - aquaticum	10	Yes	OBL
2. Rum cri (Rumex crispus)	5	Yes	FACW
3. Pic ech (Picris echioides)	10	Yes	FAC
4. Epil cil (Epilobium ciliatum)	1	No	FACW
5.			
6.			
7.			
8.			
	26 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 68 % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks: appears to have been dammed in the past & silted in.

SOIL

Sampling Point: 23

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR3-1	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Organic matter

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes X No ___ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 1

Wetland Hydrology Present? Yes X No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas (Valley Center) City/County: SD County Sampling Date: 7/6/11
Applicant/Owner: Accretive (Fernandez Prop) State: Sampling Point: 1 (24)
Investigator(s): G Schmid Section, Township, Range:
Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): Concave Slope (%): 0-2
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Sleep Gullied Land / Fallbrook sandy loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Upper half of drainage within old orchard, channel may have been widened at upper edge due to agriculture

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10m)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	80%	X	UPL
2. Salix goodingii	10%		
3.			
4.			
	90 = Total Cover		

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		

Herb Stratum (Plot size: 10m)			
1. Raphanus sativus	5	X	UPL
2. Rumex crispus	2%		
3.			
4.			
5.			
6.			
7.			
8.			
	7 = Total Cover		

Woody Vine Stratum (Plot size: 10m)			
1. Vitis girdiana	3	X	FAC
2.			
	3 = Total Cover		

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 3	x 3 =	9
FACU species	x 4 =	
UPL species 85	x 5 =	425
Column Totals: 88 (A)		434 (B)

Prevalence Index = B/A = 4.9

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Ephemeral drainage that cuts through an old oak/orchard. Few willows, but mostly upland vegetated, oak trees, chaparral

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR3/3	100	—	—	—	—	Sandy Loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks: Ephemeral drainage course that supports Oak/willow; ACOE non-wetland CDFG Riparian

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lidas City/County: SD County Sampling Date: 7/6/11

Applicant/Owner: Accretive (Kamuroa Loop) State: CA Sampling Point: 2 (25)

Investigator(s): G. Schuck Section, Township, Range:

Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): Concave Slope (%): 0-2

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

Soil Map Unit Name: Cienaba coarse sandy loam NWI classification:

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

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

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	60	Yes	UPL
2. Salix lasiandra	20	Yes	FACW
3.			
4.			
	80 = Total Cover		

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		

Herb Stratum (Plot size: ____)			
1. Typha latifolia	~~15~~ 5	Yes	OBL
2. Picris echioides	5	Yes	FAC
3. Rorippa nasturtium-aquaticum	15	Yes	OBL
4.			
5.			
6.			
7.			
8.			
	____ = Total Cover		

Woody Vine Stratum (Plot size: ____)			
1. Vitis girdiana	5	Yes	FAC
2.			
	____ = Total Cover		

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1	95%						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks: Soil saturated at sample pit; creek flowing nearby.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 6"

Water Table Present? Yes X No ____ Depth (inches): 2"

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 0-2"

Wetland Hydrology Present? Yes X No ____

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

Remarks: Creek flowing under Oak/Willow riparian woodland

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: La Cilas City/County: SD County Sampling Date: 7/6/K

Applicant/Owner: Accretive (Kaczmura) State: Sampling Point: 3 (20)

Investigator(s): G. Scheid Section, Township, Range:

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

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

Soil Map Unit Name: Steep Gullied Land NWI classification:

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

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

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20m)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	95%	Yes	UPL
2.			
3.			
4.			
	95 = Total Cover		
Sapling/Shrub Stratum (Plot size: 20m)			
1. Toxicodendron diversiloba	5	yes	UPL
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No X

Remarks: Ephemeral drainage supports only upland riparian species.

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/3	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 2 (drainage bottom only)

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

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks: Ephemeral drainage under Oak Riparian Woodland. Acre Map 10ft CDFG Riparian

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: SD County Sampling Date: 7/6/11
Applicant/Owner: Accretive (Kamura Prop.) State: CA Sampling Point: 4 (N1)
Investigator(s): G. Schmid Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Fallbrook Sandy loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	30	yes	UPL
2.			
3.			
4.			
	30 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10 m)			
1. Rorippa nasturtium aquatica	20	yes	OBL
2. Typha latifolia	5	No	OBL
3. Cyperus eragrostis	5	No	FACW
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
Woody Vine Stratum (Plot size: 10 m)			
1. Vitis	40	yes	FAC
2.			
	40 = Total Cover		

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1							

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Soil saturated, at sample pit; water table high

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- X Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 3

Water Table Present? Yes X No ___ Depth (inches): 2

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0-1

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Creek bottom supports 15-ft channel of wetland under Oak riparian

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 3/10/11

Applicant/Owner: Accretive State: CA Sampling Point: 30

Investigator(s): G. Scheid Section, Township, Range:

Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR): LRR-C Lat: Long: Datum:

Soil Map Unit Name: Steep Gullied Land / Cieneba coarse sandy loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil ____, or Hydrology X significantly disturbed? Yes Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: Vegetation cleared for agricultural purposes. Vegetation debris placed in channels to prevent erosion.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix Lasiolepis (1)	2	Yes	FACW
2. Quercus agrifolia (3-4)	10	Yes	UPL
3.			
4.			
	12 = Total Cover		

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		

Herb Stratum (Plot size: ____)			
1. Brassica nigra (Rhaphanus sativus)	40	Yes	UPL
2. Italian Thistle (Carduus sp.)	30	No	UPL
3. Bromus diandrus	7.5	NO	UPL
4. Erodium sp.	2	NO	UPL
5.			
6.			
7.			
8.			
	87 = Total Cover		

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 2	x 2 = 4
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 50	x 5 = 250
Column Totals: 52 (A)	254 (B)

Prevalence Index = B/A = 4.8

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/3						Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks: No hydric soil indicators observed; location drains rapidly

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 2"

Water Table Present? Yes X No ___ Depth (inches): 6"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 4"

Wetland Hydrology Present? Yes * No X*

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Ephemeral drainage 2-5 ft until Oaks then 15 ft to fence. Oak portion wetland; upstream non-wetland water (obsit.)

* False positive for hydrology due to recent rains.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 3/10/11

Applicant/Owner: State: CA Sampling Point: 3C

Investigator(s): G Schaid Section, Township, Range:

Landform (hillslope, terrace, etc.): Gully, hillslope Local relief (concave, convex, none): concave Slope (%): 0-5

Subregion (LRR): LRR-C Lat: Long: Datum:

Soil Map Unit Name: Placentia Sandy loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? yes Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: Vegetation cleared for ag. purposes Low flow channel obscured by mng/mulched

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Baccharis salicifolia (<10)	2	yes	FACW
2. Salix Casiophis (re-sprouts) (<10)	2	yes	FACW
3.			
4.			
5.			
	4 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Raphanus sativa	20	yes	UPL
2. Avena barbata	10	No	UPL
3. Hordeum sp.	2	No	UPL
4. Bromus diandrus	40	yes	UPL
5. Bromus madritensis	10	No	UPL
6. Picris echioides	10	No	~~FAC~~ UPL
7. Ambrosia psilostachya	2	No	FAC
8.			
	94 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 2 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 4	x 2 =	8
FAC species 12	x 3 =	36
FACU species	x 4 =	
UPL species 82	x 5 =	410
Column Totals: 98 (A)		454 (B)

Prevalence Index = B/A = 4.6

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 31

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR3/3							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- Y Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Ephemeral drainage. channel width ranges for 5 ft to 20 ft
CDFG shrubd / Dist. wetland?

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 3/10/11
Applicant/Owner: Accretive State: CA Sampling Point: 3P
Investigator(s): G. Schied Section, Township, Range:
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): Concave Slope (%): 0-5
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Steep Gullied Land / Cieneba coarse sandy loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation X, Soil , or Hydrology significantly disturbed? Yes Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X No	
Wetland Hydrology Present?	Yes X No	

Remarks: Veg. debris dumped in channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	50	Yes	FACW
2. Quercus agrifolia	20	Yes	UPL
3.			
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. Nicotiana glauca	5	Yes	UPL
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size:)			
1. Italian Thistle (Carduus)	2	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	2	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 23 % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 50	x 2 = 100
FAC species	x 3 =
FACU species	x 4 =
UPL species 27	x 5 = 135
Column Totals: 77 (A)	235 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: Vegetation disturbed due to debris dumped from adjacent agriculture operation.

SOIL

Sampling Point: 32

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR3/2						Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 3"

Water Table Present? Yes X No ___ Depth (inches): 6"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 3"

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Sample in low flow channel within ditch.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lilas City/County: San Diego County Sampling Date: 3/10/11

Applicant/Owner: State: CA Sampling Point: 33

Investigator(s): G. Schmid Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): Concave Slope (%):

Subregion (LRR): LRR-C Lat: Long: Datum:

Soil Map Unit Name: Steep Gullied Land / Cieneba coarse sandy loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ____
Hydric Soil Present?	Yes ____ No ____	
Wetland Hydrology Present?	Yes ____ No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	15	Yes	UPL
2. Populus fremontii (1)	5	Yes	FAC
3.			
4.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Salvia mellifera	25	Yes	UPL
2. Artemisia californica	10	No	UPL
3. Heteromeles arbutifolia	10	No	UPL
4. Adenostoma fasciculata	10	No	UPL
5.			
	55 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Italian thistle (Carduus sp.)	20	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	20 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 = ____	
FACW species ____	x 2 = ____	
FAC species 5	x 3 = 15	
FACU species ____	x 4 = ____	
UPL species 65	x 5 = 325	
Column Totals: 70 (A)	340 (B)	

Prevalence Index = B/A = 6.2

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 33

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/3							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Upland Oak woodland island between two channels.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Las Lidas City/County: San Diego County Sampling Date: 3/10/11

Applicant/Owner: State: CA Sampling Point: 34

Investigator(s): G. Schmid Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope drainage Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR): LRR-C Lat: Long: Datum:

Soil Map Unit Name: Cieneba coarse sandy loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil , or Hydrology significantly disturbed? yes Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**Is the Sampled Area within a Wetland?** Yes No
Hydric Soil Present?	Yes	No	
Wetland Hydrology Present?	Yes	No	

Remarks: Veg dist., area part of orchard w/remnant patches of chaparral; mostly annual grasses in understory.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. Heteromeles arbutifolia	10	yes	UPL
2. Malosma laurina	10	yes	UPL
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size:)			
1. Bromus diandrus	50	yes	UPL
2. Avena barbata	10	No	UPL
3. Italian Thistle (Carduus sp.)	10	No	UPL
4.			
5.			
6.			
7.			
8.			
	70 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species 90	x 5 =	450
Column Totals: 90 (A)		450 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sampling Point: 3c

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/3							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No wetland hydrology indicators observed. Location within ephemeral drainage within upland area. ACOE - non-wetland water

CDFG - Streambed

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: SD / SD Sampling Date: 1-11-12
Applicant/Owner: Accretive Group State: CA Sampling Point: 35 (1)
Investigator(s): G. Scheid Section, Township, Range:
Landform (hillslope, terrace, etc.): Steep gully Local relief (concave, convex, none): concave Slope (%): 5-10%
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Fallbrook Sandy Loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20m²)			
1. Nicotiana glauca	10	N	UPL
2. Malosma laurina	30	Y	UPL
3. Salvia mellifera	10	N	UPL
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: 20m²)			
1. Rhamnus sativa	40	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	Ø = Total Cover		

% Bare Ground in Herb Stratum 10% % Cover of Biotic Crust —

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: Ø (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: Ø (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 =	____
FACW species ____	x 2 =	____
FAC species ____	x 3 =	____
FACU species ____	x 4 =	____
UPL species 90	x 5 =	450
Column Totals: 90 (A)		450 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	5YR 3/3	100	—	—	—	—	—	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Steep gully; upland vegetation; ephemeral tributary drainage

Offsum = 6ft Non-wetland water / Streambed / RPW

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / San Diego Sampling Date: 1-11-12
Applicant/Owner: Accretive Group State: CA Sampling Point: 36 (5)
Investigator(s): G. Scheid Section, Township, Range:
Landform (hillslope, terrace, etc.): Valley Bottom Local relief (concave, convex, none): Concave Slope (%): 0-2%
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Fallbrook sandy loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area within a Wetland? Yes X No
Hydric Soil Present?	Yes Y No	
Wetland Hydrology Present?	Yes Y No	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lavigata	40	Y	FACW
2. Quercus agrifolia	10	N	UPL
3. Salix lasiolepis	20	N	FACW
4.			
	70 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. None			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10m²)			
1. Cyperus eschulentus	2	Y	FACW
2. Rorippa nasturtium-aquatica	2	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	4 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 16 % Cover of Biotic Crust —

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: 36

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	95	10YR 3/1	5	RM	M		
5-10	10YR 3/2	95	Gley1 5/N	5	RM	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- X Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 3

Water Table Present? Yes X No ___ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Sample point in intermittent stream Ottawa is 21 ft wide

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / SD Sampling Date: 1-11-12

Applicant/Owner: Accretive Group State: CA Sampling Point: 37 G

Investigator(s): G. Scheid Section, Township, Range:

Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope (%): 5-10 %

Subregion (LRR): LRR-C Lat: Long: Datum:

Soil Map Unit Name: Fallbrook Sandy Loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Yes Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No 4	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No 4	
Wetland Hydrology Present?	Yes ____	No 4	

Remarks: Native vegetation converted to orchard.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Avacado	30	Y	UPL
2.			
3.			
4.			
	30 = Total Cover		

Sapling/Shrub Stratum (Plot size: ____)			
1. none			
2.			
3.			
4.			
5.			
	— = Total Cover		

Herb Stratum (Plot size: 10 m²)			
1. Brassica sp.	5	N	UPL
2. Malva parviflora	5	N	UPL
3. Anagalis arvensis	15%	Y	UPL
4. Erodium cicutarium	25%	Y	UPL
5.			
6.			
7.			
8.			
	50 = Total Cover		

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	— = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust —

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 80	x 5 = 400
Column Totals: 80 (A)	400 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 37

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10YR 3/3	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Sample pt. in adjacent upland, outside of otter

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / SD Sampling Date: 1-11-12

Applicant/Owner: Accretive Group State: CA Sampling Point: 38 (4)

Investigator(s): G. Scheid Section, Township, Range:

Landform (hillslope, terrace, etc.): gully Local relief (concave, convex, none): Concave Slope (%): 0-5%

Subregion (LRR): LRR-C Lat: Long: Datum:

Soil Map Unit Name: Fallbrook sandy loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil , or Hydrology significantly disturbed? yes Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	Is the Sampled Area within a Wetland? Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	

Remarks: Native vegetation disturbed due to agricultural activities.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	✓ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 m²)			
1. Nicotiana glauca	2	Y	UPL
2. Tamarix ramosissima	2	Y	FAC
3.			
4.			
5.			
	4 = Total Cover		
Herb Stratum (Plot size: 10 m²)			
1. Rhaphanus sativus	10	N	UPL
2. Brassica nigra	80	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	✓ = Total Cover		

% Bare Ground in Herb Stratum 6 % Cover of Biotic Crust ✓

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species	2	x 3 =	6
FACU species		x 4 =	
UPL species	92	x 5 =	460
Column Totals:	94 (A)		466 (B)

Prevalence Index = B/A = 4.8

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sampling Point: 38

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR3/2	100%					Sandy Loam	
12-18	7.5YR3/3	100%					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Ephemeral drainage in orchard; tributary to main drainage. OHWM ≈ 15ft. wide; non-wetland waters streambed

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / SD Sampling Date: 1-11-12

Applicant/Owner: Accretive Group State: CA Sampling Point: 39 (5)

Investigator(s): G. Schmid Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): Concave Slope (%): 5-10%

Subregion (LRR): LRR-C Lat: Long: Datum:

Soil Map Unit Name: Fallbrook sandy loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	Is the Sampled Area within a Wetland? Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	100	Y	FACW
2. Salix lasiandra	15	N	FACW
3.			
4.			
	15 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. none			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10m²)			
1. Ricinus communis-aquaticum	15	Y	OBL
2. Cynodon dactylon	5	N	FACU
3. Rumex crispus	2	N	FACW
4.	2		
5.			
6.			
7.			
8.			
	22 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 3 % Cover of Biotic Crust ~

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: 39

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 6/1	95	10YR 5/6	100				clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- X Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 2

Water Table Present? Yes X No ___ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / SD Sampling Date: 1-11-12
Applicant/Owner: Accretive Group State: CA Sampling Point: 40 (6)
Investigator(s): G. Schmid Section, Township, Range:
Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): Concave Slope (%): 5-10%
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Fallbrook sandy loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X No	
Wetland Hydrology Present?	Yes X No	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	60	Y	FACW
2. Eucalyptus sp.	30	Y	UPL
3. Washingtonia robusta	5	N	FAC
4.			
	95	= Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1. None			
2.			
3.			
4.			
5.			
	—	= Total Cover	

Herb Stratum (Plot size: ____)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	—	= Total Cover	

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	—	= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust —

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 60	x 2 = 120
FAC species 5	x 3 = 15
FACU species ____	x 4 = ____
UPL species 30	x 5 = 150
Column Totals: 95 (A)	285 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: 40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR3/2	95	5YR6/8	5	RM	M	Loamy Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 3

Water Table Present? Yes X No ___ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Sample point in intermittent stream channel to left side

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / SD Sampling Date: 1-11-12
Applicant/Owner: Accretive Group State: CA Sampling Point: 41 (4)
Investigator(s): G. Scheid Section, Township, Range:
Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): concave Slope (%): 5-10%
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Fallbrook sandy loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ____
Hydric Soil Present?	Yes ____ No ____	
Wetland Hydrology Present?	Yes ____ No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	40	Y	UPL
2. Washingtonia robusta	5	N	FAC
3. Salix lasiolepis	10	N	FACW
4.			
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. None			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: ____)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
		= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1. Vitis girdiana	40	Y	FAC
2.			
	40	= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	10	x 2 =	20
FAC species	45	x 3 =	135
FACU species		x 4 =	
UPL species	40	x 5 =	200
Column Totals:	95 (A)		355 (B)

Prevalence Index = B/A = 3.7

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 41

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
6-18	10YR3/3	100					Loamy Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Sample pt. in oak woodland; riparian, non-wetland water

Others ≈ 10-20ft wide

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / SD Sampling Date: 2-14-12
Applicant/Owner: Accretive Group State: CA Sampling Point: 42 O
Investigator(s): G. Scheid Section, Township, Range:
Landform (hillslope, terrace, etc.): Steep Slope Local relief (concave, convex, none): Convex Slope (%): 10%
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Steep gullied Land NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Yes Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks: native vegetation recently disturbed either by fire or clearing.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	/	= Total Cover	
Sapling/Shrub Stratum (Plot size: 20m²)			
1. Xylococcus bicolor	20	Y	UPL
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 20m²)			
1. Bromus sp.	40	Y	UPL
2. Stipa pulchra	10	N	UPL
3. Salsola tragus	5	N	UPL
4.			
5.			
6.			
7.			
8.			
	55	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	/	= Total Cover	

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: Ø (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: Ø (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species 75	x 5 = 325
Column Totals: 75 (A)	325 (B)

Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 42

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/3	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soils indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No hydrology indicators observed, Sample area a series of steep ephemeral drainages. Offsite ~ 3-5 ft wide non-wetland water, streambed

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego, SDiego Sampling Date: 2-14-12
Applicant/Owner: Accretive Group State: CA Sampling Point: 213 (e)
Investigator(s): G. Scheid Section, Township, Range:
Landform (hillslope, terrace, etc.): gully bottom Local relief (concave, convex, none): concave Slope (%): 0-5
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Steep gullied land NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	Is the Sampled Area within a Wetland? Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	30	Y	FACW
2.			
3.			
4.			
	30 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. None			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 20 m²)			
1. Ludwigia peploides	40	Y	OBL
2. Scirpus robustus	20	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	/ = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: 43

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR3/2	80	5YR6/8	20	RM	M	loamy clay	
8-16	10YR3/1	90	5YR6/8	10	RM	M	"	"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Y Surface Water (A1)
- Y High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 12

Water Table Present? Yes X No ___ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 8

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Sample point in impounded area of drainage.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / San Diego Sampling Date: 2-14-12

Applicant/Owner: Accretive Group State: CA Sampling Point: 44 (3)

Investigator(s): G-Scheid Section, Township, Range:

Landform (hillslope, terrace, etc.): gully Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR): LRR-C Lat: Long: Datum:

Soil Map Unit Name: Steep gullied land NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	Is the Sampled Area within a Wetland? Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	70	y	UPL
2.			
3.			
4.			
	70 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. none			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 20 m²)			
1. Conium maculatum	25	y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species 25	x 3 = 75
FACU species ____	x 4 = ____
UPL species 70	x 5 = 350
Column Totals: 95 (A)	425 (B)

Prevalence Index = B/A = 4.4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 44

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR3/3	100						
10-16	10YR3/2	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Ephemeral drainage in oak riparian woodland. non-wetland waters

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / SD Sampling Date: 2-14-12

Applicant/Owner: Accretive Group State: CA Sampling Point: 45 (4)

Investigator(s): G. Schleid Section, Township, Range:

Landform (hillslope, terrace, etc.): gully Local relief (concave, convex, none): concave Slope (%): 0-5

Subregion (LRR): LRR-C Lat: Long: Datum:

Soil Map Unit Name: Steep gullied land. NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil , or Hydrology significantly disturbed? yes Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area within a Wetland? Yes X No
Hydric Soil Present?	Yes X No	
Wetland Hydrology Present?	Yes X No	

Remarks: Native vegetation moderately disturbed due to partial clearing and green waste dumping.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1. None			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10 m²)			
1. Baccharis salicifolia	60	Y	FACW
2.			
3.			
4.			
5.			
	60 = Total Cover		
Herb Stratum (Plot size:)			
1. Conium maculatum	30	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	— = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: 45

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR3/2	95	5YR6/8	5	RM	M	Sandy over clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Ephemeral drainage, disturbed; Otowi 3F crack

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego/San Diego Sampling Date: 2-14-12
Applicant/Owner: Accretive Group State: _____ Sampling Point: 46 (6)
Investigator(s): G. Scheid Section, Township, Range: _____
Landform (hillslope, terrace, etc.): gully Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): LRR-C Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Steep Gullied Land NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? yes Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No _____	

Remarks: Vegetation in understory disturbed from clearing, green waste/trash dumping

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	75	Y	FACW
2.			
3.			
4.			
	75 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. None			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 20m²)			
1. Conium maculatum	15	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	15 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 46

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR3/2	95	5YR6/8	5	RM	M	Sandy Loam	
(6-8)	black organic		layered; buried					

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- X Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- X Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 12

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / SD Sampling Date: 3/21/12
Applicant/Owner: Accretive Group State: Sampling Point: 47 U
Investigator(s): G. Scheid Section, Township, Range:
Landform (hillslope, terrace, etc.): Slope - gully Local relief (concave, convex, none): concave Slope (%): 5-10%
Subregion (LRR): LRR-C Lat: Long: Datum:
Soil Map Unit Name: Steep Gullied Land NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation X, Soil , or Hydrology significantly disturbed? Yes Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	Is the Sampled Area within a Wetland? Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	

Remarks: Native vegetation in drainage cleared for agricultural purposes. Drainage used for green waste dumping.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30m²)			
1. Malosma laurina	5	Y	UPL
2. Nicotiana glauca	2	Y	UPL
3.			
4.			
5.			
	7 = Total Cover		
Herb Stratum (Plot size: 30m²)			
1. Rhaphanus sativus	40	Y	UPL
2. Bromus diandrus	25	N	UPL
3. Vulpia myuros	25	N	UPL
4. Mesembryanthemum sp.	5	N	UPL
5.	~~Ø~~		
6.			
7.			
8.			
	95 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum Ø % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: Ø (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: Ø (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species 99	x 5 = 495
Column Totals: 99 (A)	495 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL Sampling Point: 47

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18"	10YR 3/3	100	—	—	—	—	Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water Marks (B1) (**Riverine**)
___ Sediment Deposits (B2) (**Riverine**)
___ Drift Deposits (B3) (**Riverine**)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Thin Muck Surface (C7)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): _____
Water Table Present? Yes ____ No ____ Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Steep ephemeral drainage course in old orchard. Non-wetland water w/ OHWM = 3-10 ft streambed CDFG

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lilac Hills Ranch City/County: San Diego / SD Sampling Date: 3/21/12
Applicant/Owner: Accretive Group State: _____ Sampling Point: 4B (2)
Investigator(s): G. Scheid Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Valley bottom - gully Local relief (concave, convex, none): concave Slope (%): 2-5
Subregion (LRR): LRR-C Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Steep Gullied Land NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? yes Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: Vegetation cleared for agricultural purposes; green waste dumping present.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	2	Y	UPL
2.			
3.			
4.			
	2	= Total Cover	

Sapling/Shrub Stratum (Plot size: 20m²)			
1. Malosma laurina	40	Y	UPL
2. Nicotiana glauca	2	N	UPL
3. Bromus madritensis	25	Y	UPL
4. Brassica sp.	10	Y	UPL
5.			
	87	= Total Cover	

Herb Stratum (Plot size: _____)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
		= Total Cover	

Woody Vine Stratum (Plot size: _____)			
1. Marah macrocarpa	Y	20	UPL
2.			
	20	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species 100	x 5 =	500
Column Totals: 100 (A)		500 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 48

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10YR 3/3	100	—	—	—	—	Coarse Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Ephemeral drainage near orchard. Non-wetland waters w/ OHWM ≈10 ft. CDFG streambed.

ATTACHMENT 13

Addendum Letter
(Sight Distance Biology Survey for covey Lane and West Lilac Road)

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San Diego, CA 92101
P 619.308.9333
F 619.308.9334

2033 East Grant Road
Tucson, AZ 85719
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F 520.293.3051

2027 Preisker Lane, Ste. G
Santa Maria, CA 93454
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RECON

An Employee-Owned Company

June 5, 2013

Mr. Mark Slovick
County of San Diego
Planning and Development Services
5510 Overland Avenue, 3rd Floor
San Diego, CA 92123-1666

Reference: Sight Distance Biology Survey for Covey Lane and West Lilac Road
(RECON Number 6153)

Dear Mr. Slovick:

A site visit was made to assess that biological resources present in the proposed area of clearing to improve and meet the sight distance requirements to the south of the intersection of Covey Lane and West Lilac Road. The proposed area to be cleared is located on the east side of West Lilac Road just south of its intersection with Covey Lane (see enclosure). The approximately 480 feet of clearing would occur on a slope that is vegetated with predominantly non-native ornamental trees (e.g., pine, pepper, eucalyptus, olive) with non-native fountain grass on the road cut slope. Two native coast live oak trees occur at the south end of the clearing zone, but if impacts to these trees can be restricted to removal of the lower limbs and not complete tree removal then no significant impacts to biological resources would occur.

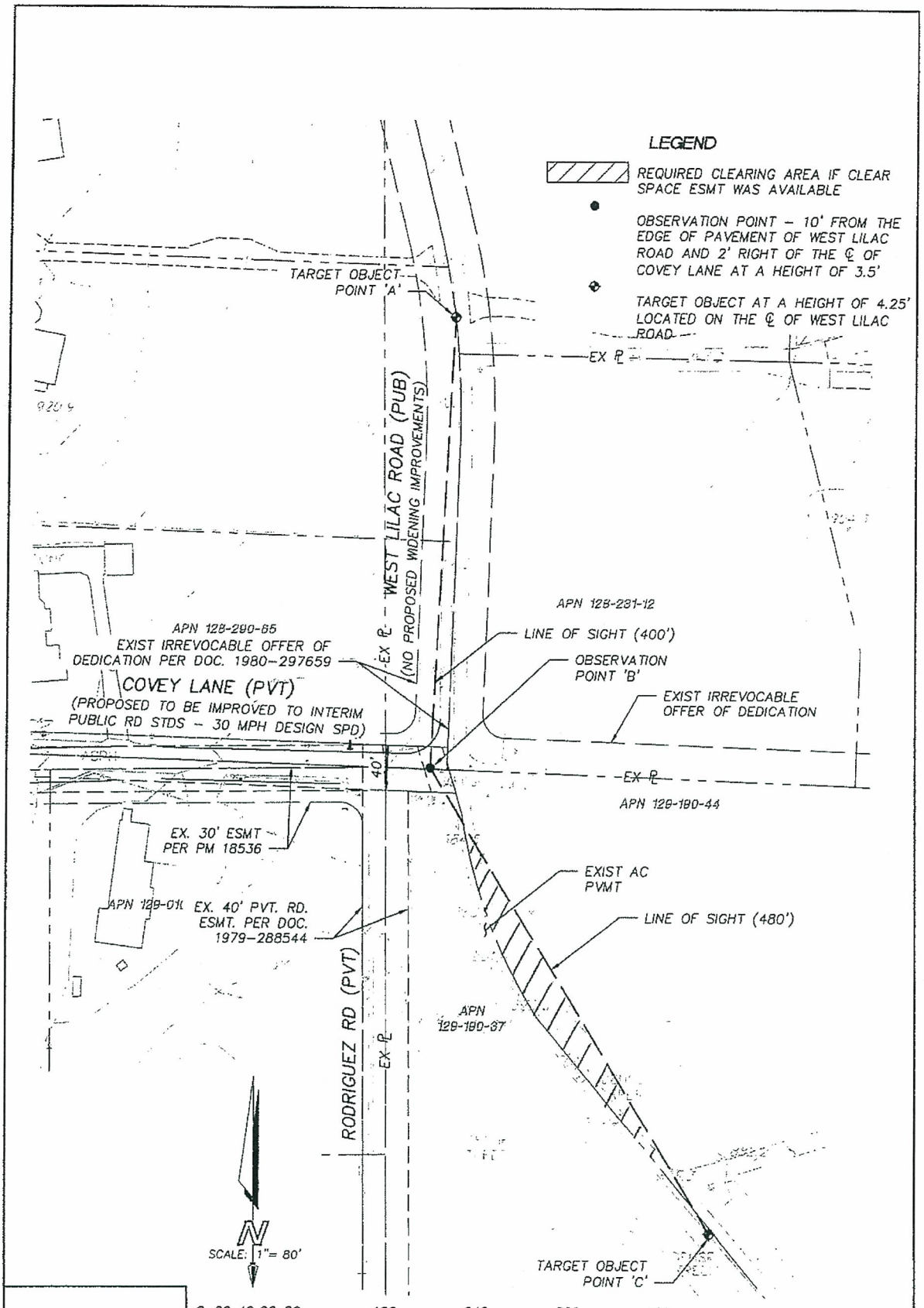
Sincerely,

Gerry Scheid
Senior Biologist

GAS:sh

Enclosure

cc/enc: Jon Rilling, Accretive Investments, Inc.



LANDMARK CONSULTING
Planning Engineering Surveying
9555 Genesee Avenue, Suite 200
San Diego, CA 92121, (858) 587-9070

FIGURE 2
SIGHT DISTANCE ANALYSIS
WEST LILAC ROAD AND COVEY LANE

F:\Dropbox\103-7\Drawings\ALT 1\Exhibits\Sight Distance Analysis\103-7 W Lilac Covey Ln clear space esmt.dwg, 2/12/2013 3:04:07 PM, 1:1

ATTACHMENT 14

Biological Open Space Signage and Trails

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ATTACHMENT 14

RPO Wetland Crossing Findings Analysis

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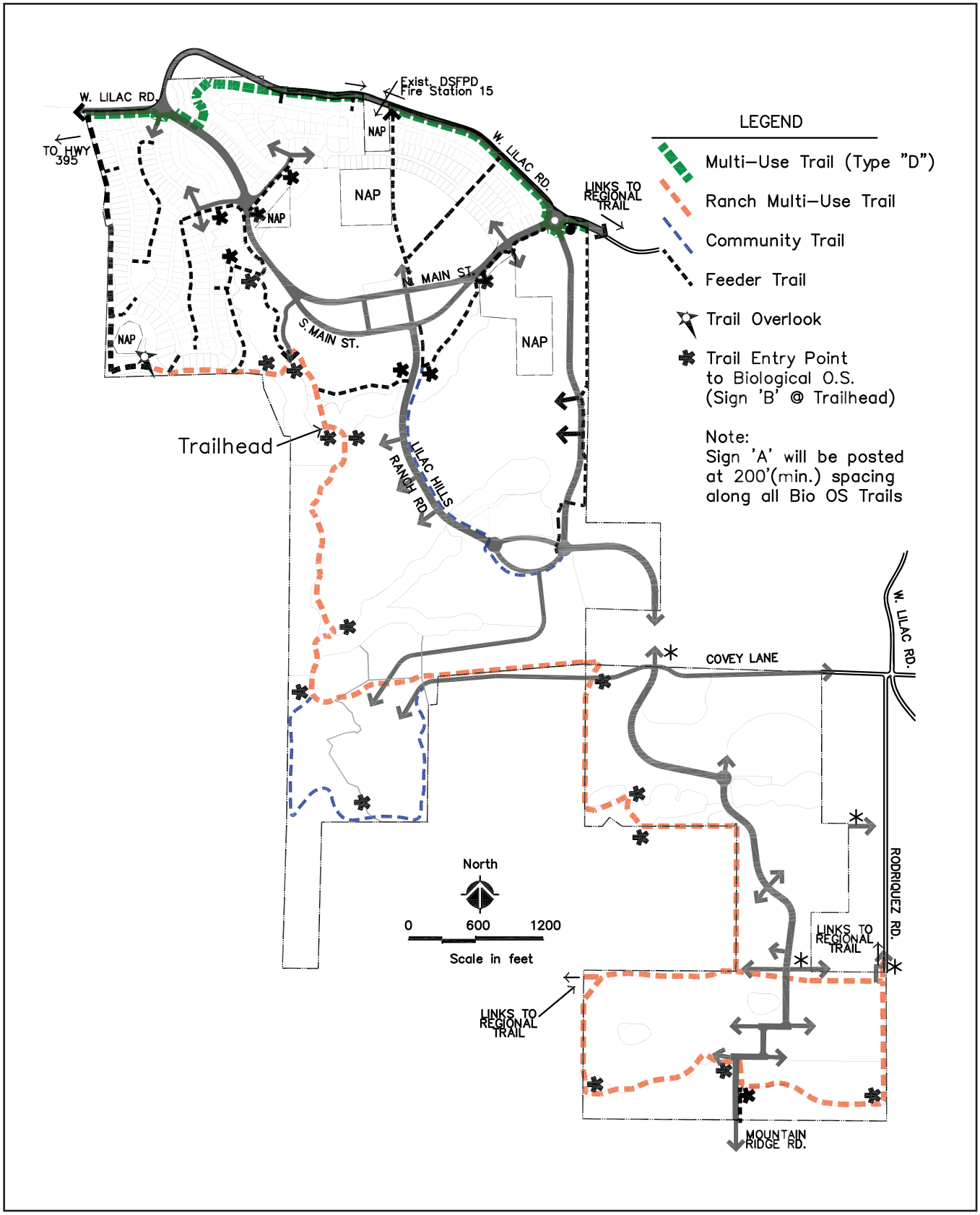

FIGURE 1a

Biological Open Space Trail and Signage Map: Alternative 'A'

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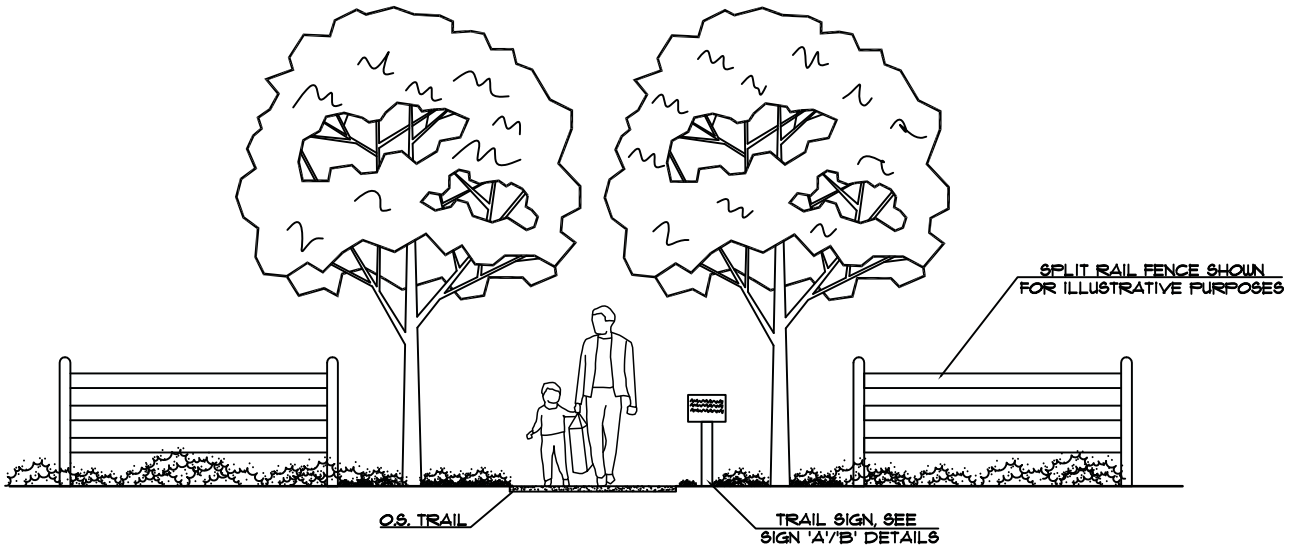

FIGURE 1b

Biological Open Space Trail and Signage Map: Alternative 'A'

RECON

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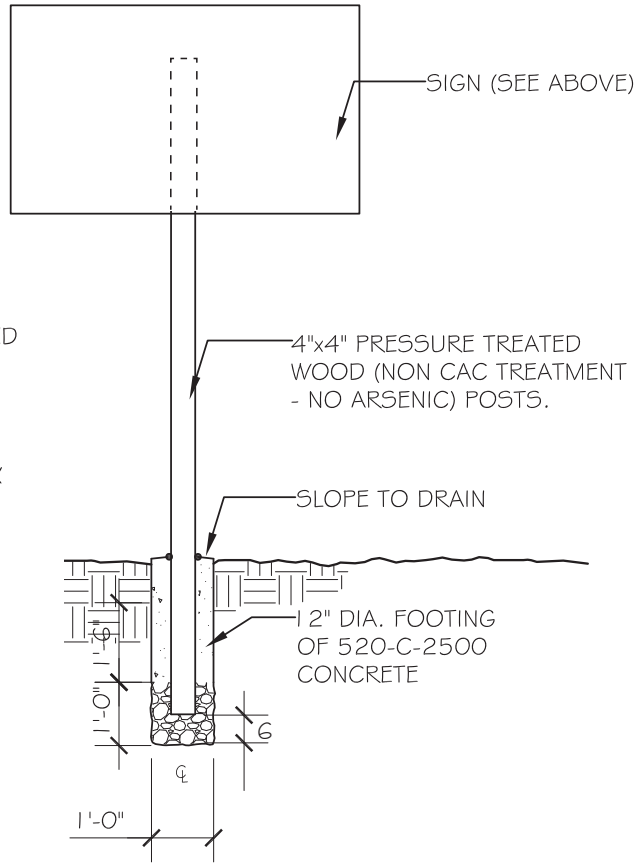
NOTES:

1. SIGNS SHALL BE MANUFACTURED OF ALUMINUM SHEET, THICKNESS 0.08" MIN.
2. SIGNS WILL INCORPORATE BACKGROUND TO MATCH FRAZEE 8200W BLEACHED SAND. GRAPHIC AND LETTERING COLOR TO BE VERIFIED WITH OWNER.
3. SIGNS SHALL BE MOUNTED ON 4"X4" POSTS WITH BOTTOM EDGE 36" ABOVE GRADE.
4. ATTACHMENT TO POSTS USING 1/4" X 2-1/2" ANODIZED LAG SCREWS AND WASHERS (2 EA.)
5. SIGNAGE WILL BE SPACED @ 200' O.C. (MAX.) ALONG TRAIL



SIGN 'A'

N.T.S.

FIGURE 1c

Biological Open Space Trail and Signage Map: Alternative 'A'

RECON

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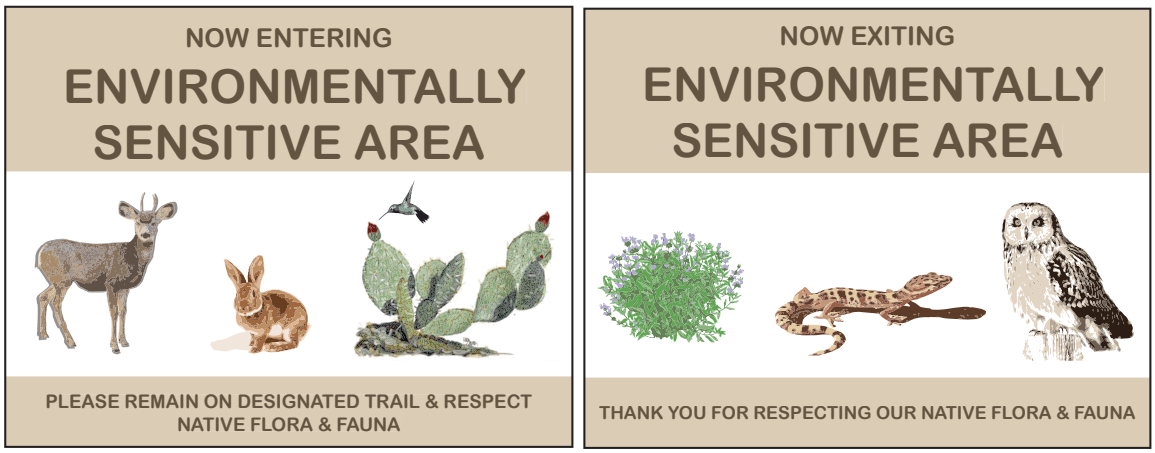
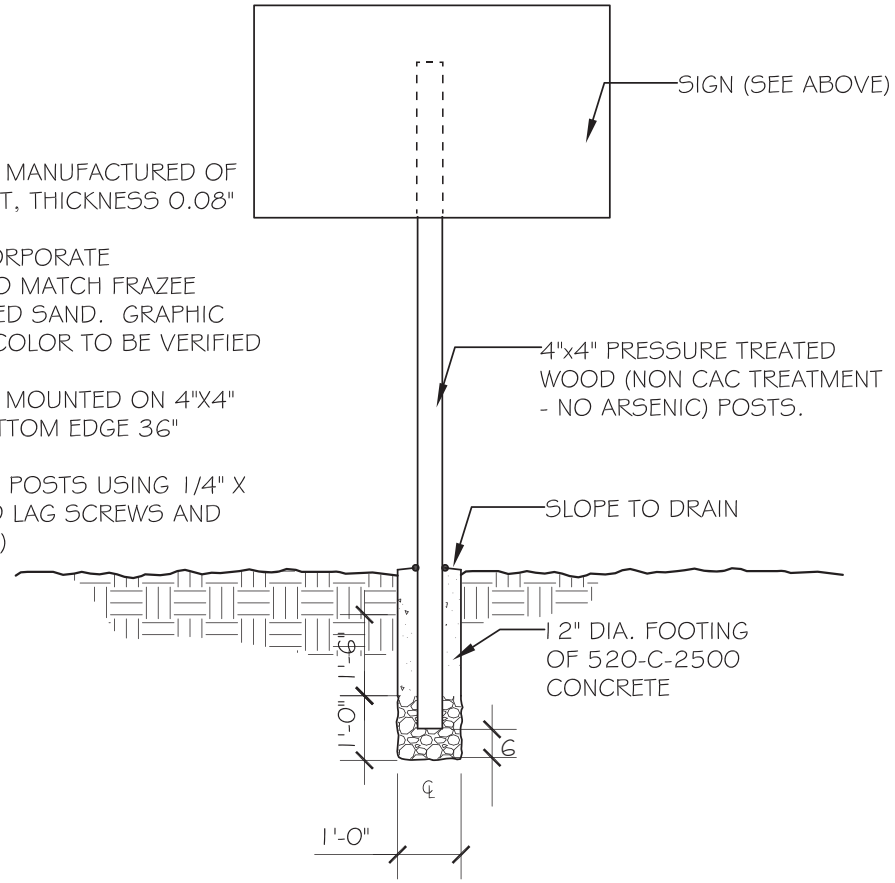


FRONT OF SIGN

BACK OF SIGN

NOTES:

1. SIGNS SHALL BE MANUFACTURED OF ALUMINUM SHEET, THICKNESS 0.08" MIN.
2. SIGNS WILL INCORPORATE BACKGROUND TO MATCH FRAZEE 8200W BLEACHED SAND. GRAPHIC AND LETTERING COLOR TO BE VERIFIED WITH OWNER.
3. SIGNS SHALL BE MOUNTED ON 4"X4" POSTS WITH BOTTOM EDGE 36" ABOVE GRADE.
4. ATTACHMENT TO POSTS USING 1/4" X 2-1/2" ANODIZED LAG SCREWS AND WASHERS (2 EA.)



SIGN 'B'

N.T.S.

FIGURE 1d

Biological Open Space Trail and Signage Map: Alternative 'A'

RECON

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ATTACHMENT 15

RPO Wetland Crossing Findings Analysis

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ATTACHMENT 15
RPO WETLAND CROSSING FINDINGS ANALYSIS
(See Attached Figure A for Locations of RPO Wetland Crossings)

RPO Finding	Crossing 1	Crossing 2	Crossing 3	Crossing 4	Crossing 5	Crossing 6	Crossing 7
There is no feasible alternative that avoids the wetland	West Lilac Road must cross at this location to meet engineering road standards and minimize additional crossing of RPO wetlands.	This crossing is required to provide secondary access to the development area to meet safety standards.	This crossing is required to provide access within the development and to eliminate the need for additional crossings of RPO wetlands.	West Lilac Road must cross at this location to meet engineering road standards and minimize additional crossing of RPO wetlands.	This crossing is required to provide secondary access to the development area to meet safety standards.	This crossing is required to provide secondary access to the development area to meet safety standards.	This crossing is required to provide secondary access to the development area to meet safety standards.
The crossing(s) are located and designed in such a way as to cause the least impact to environmental resources, minimize impacts to sensitive species, and prevent barriers to wildlife movement (e.g., crossing widths shall be the minimum feasible and wetlands shall be bridged where feasible.)	Impacts for this proposed crossing are through willow riparian woodland habitat; the proposed crossing is designed to the narrowest feasible width for the type of road; a 30-inch culvert is proposed at this crossing.	Impacts at this proposed crossing are through freshwater marsh and willow riparian woodland habitat; the proposed crossing is designed to the narrowest feasible width for the type of road; the crossing is located at an existing road crossing which helps to minimize impacts to RPO wetlands; a 20-inch culvert is proposed at this crossing.	Impacts at this proposed crossing are through oak riparian woodland habitat; the proposed crossing is designed to the narrowest feasible width for the type of road; a 20-inch culvert is proposed at this crossing.	Impacts at this proposed crossing are through coast live oak riparian woodland habitat; the proposed crossing is designed to the narrowest feasible width for the type of road; the proposed crossing is located at an existing road crossing which helps to minimize impacts to RPO wetlands; a 18-inch culvert is proposed at this crossing.	Impacts at this proposed crossing are through coast live oak riparian woodland habitat; the proposed crossing is designed to the narrowest feasible width for the type of road; the proposed crossing is located at an existing road crossing which helps to minimize impacts to RPO wetlands; a 30-inch culvert is proposed at this crossing.	Impacts at this proposed crossing are through a narrow band of coast live oak riparian woodland habitat; the proposed crossing is designed to the narrowest feasible width for the type of road; the proposed crossing is located at an existing road crossing where the existing habitat is narrow which helps to minimize impacts to RPO wetlands; a 30-inch culvert is proposed at this crossing.	Impacts at this proposed crossing are through a narrow band of disturbed southern willow scrub habitat; the proposed crossing is designed to the narrowest feasible width for the type of road; the proposed crossing is located at an existing road crossing where the existing wetland habitat is narrow and disturbed from the adjacent agricultural operation, which helps to minimize impacts to RPO wetlands; a 54-inch culvert is proposed at this crossing.
The least-damaging construction methods are utilized (e.g., staging areas shall be located outside of sensitive areas, work shall not be performed during the sensitive avian breeding season, noise attenuation measures shall be included and hours of operation shall be limited so as to comply with all applicable ordinances and to avoid impacts to sensitive resources.	All construction staging areas will be located outside of any sensitive biological resource areas. To the extent feasible work will be conducted outside of the sensitive avian breeding season. If work must be conducted during the sensitive avian breeding season then appropriate noise attenuation measures shall be used to avoid and minimize indirect impacts, including potential restrictions on the hours of operation of construction activities.	All construction staging areas will be located outside of any sensitive biological resource areas. To the extent feasible work will be conducted outside of the sensitive avian breeding season. If work must be conducted during the sensitive avian breeding season then appropriate noise attenuation measures shall be used to avoid and minimize indirect impacts, including potential restrictions on the hours of operation of construction activities.	All construction staging areas will be located outside of any sensitive biological resource areas. To the extent, feasible work will be conducted outside of the sensitive avian breeding season. If work must be conducted during the sensitive avian breeding season then appropriate noise attenuation measures shall be used to avoid and minimize indirect impacts, including potential restrictions on the hours of operation of construction activities.	All construction staging areas will be located outside of any sensitive biological resource areas. To the extent feasible work will be conducted outside of the sensitive avian breeding season. If work must be conducted during the sensitive avian breeding season then appropriate noise attenuation measures shall be used to avoid and minimize indirect impacts, including potential restrictions on the hours of operation of construction activities.	All construction staging areas will be located outside of any sensitive biological resource areas. To the extent feasible work will be conducted outside of the sensitive avian breeding season. If work must be conducted during the sensitive avian breeding season then appropriate noise attenuation measures shall be used to avoid and minimize indirect impacts, including potential restrictions on the hours of operation of construction activities.	All construction staging areas will be located outside of any sensitive biological resource areas. To the extent feasible work will be conducted outside of the sensitive avian breeding season. If work must be conducted during the sensitive avian breeding season then appropriate noise attenuation measures shall be used to avoid and minimize indirect impacts, including potential restrictions on the hours of operation of construction activities.	All construction staging areas will be located outside of any sensitive biological resource areas. To the extent feasible work will be conducted outside of the sensitive avian breeding season. If work must be conducted during the sensitive avian breeding season then appropriate noise attenuation measures shall be used to avoid and minimize indirect impacts, including potential restrictions on the hours of operation of construction activities.
The applicant shall prepare an analysis of whether the crossing could feasibly serve adjoining properties and thereby result in minimizing the number of additional crossing required by adjacent development.	The proposed crossing could eliminate or minimize the number of additional crossings required by adjacent development.	The proposed crossing could eliminate or minimize the number of additional crossings required by adjacent development.	The proposed crossing could eliminate or minimize the number of additional crossings required by adjacent development.	The proposed crossing could eliminate or minimize the number of additional crossings required by adjacent development.	The proposed crossing could eliminate or minimize the number of additional crossings required by adjacent development.	The proposed crossing could eliminate or minimize the number of additional crossings required by adjacent development.	The proposed crossing could eliminate or minimize the number of additional crossings required by adjacent development.
There must be no net loss of wetlands and any impacts to wetlands shall be mitigated at a minimum ratio of 3:1 (this shall include 1:1 creation component, while the restoration/enhancement of existing wetlands may be used to make up the remaining requirements for a total of 3:1 ratio).	The project will provide mitigation for impacts to RPO wetlands at a 3:1 ratio such that there would be a no net loss of wetlands. A minimum 1:1 ratio of the mitiga-tion will be the creation of wetland habitat, while the remaining 2:1 ratio of the mitigation will be achieved through the enhancement of disturbed wetlands that will remain in on-site biological open space.	The project will provide mitigation for impacts to RPO wetlands at a 3:1 ratio such that there would be a no net loss of wetlands. A minimum 1:1 ratio of the mitiga-tion will be the creation of wetland habitat, while the remaining 2:1 ratio of the mitigation will be achieved through the enhancement of disturbed wetlands that will remain in on-site biological open space.	The project will provide mitigation for impacts to RPO wetlands at a 3:1 ratio such that there would be a no net loss of wetlands. A minimum 1:1 ratio of the mitiga-tion will be the creation of wetland habitat, while the remaining 2:1 ratio of the mitigation will be achieved through the enhancement of disturbed wetlands that will remain in on-site biological open space.	The project will provide mitigation for impacts to RPO wetlands at a 3:1 ratio such that there would be a no net loss of wetlands. A minimum 1:1 ratio of the mitiga-tion will be the creation of wetland habitat, while the remaining 2:1 ratio of the mitigation will be achieved through the enhancement of disturbed wetlands that will remain in on-site biological open space.	The project will provide mitigation for impacts to RPO wetlands at a 3:1 ratio such that there would be a no net loss of wetlands. A minimum 1:1 ratio of the mitiga-tion will be the creation of wetland habitat, while the remaining 2:1 ratio of the mitigation will be achieved through the enhancement of disturbed wetlands that will remain in on-site biological open space.	The project will provide mitigation for impacts to RPO wetlands at a 3:1 ratio such that there would be a no net loss of wetlands. A minimum 1:1 ratio of the mitiga-tion will be the creation of wetland habitat, while the remaining 2:1 ratio of the mitigation will be achieved through the enhancement of disturbed wetlands that will remain in on-site biological open space.	The project will provide mitigation for impacts to RPO wetlands at a 3:1 ratio such that there would be a no net loss of wetlands. A minimum 1:1 ratio of the mitiga-tion will be the creation of wetland habitat, while the remaining 2:1 ratio of the mitigation will be achieved through the enhancement of disturbed wetlands that will remain in on-site biological open space.

ATTACHMENT 15
RPO WETLAND CROSSING FINDINGS EXEMPTION ANALYSIS FOR WEST LILAC ROAD (Crossings 1 and 3)
ESSENTIAL PUBLIC FACILITY
(See Attached Figure A for Locations of RPO Wetland Crossings)

RPO Finding	Crossing 1	Crossing 3
The facility or project is consistent with adopted community or subregional plan	West Lilac Road is classified as a "Mobility Element" road by the County of San Diego's General Plan Circulation Element. The proposed alignment is consistent with what is depicted in the County's General Plan and the Valley Center Community Plan.	West Lilac Road is classified as a "Mobility Element" road by the County of San Diego's General Plan Circulation Element. The proposed alignment is consistent with what is depicted in the County's General Plan and the Valley Center Community Plan.
All possible mitigation measures have been incorporated into the facility or project and there are no feasible less environmentally damaging location, alignment, or non-structural alternatives that would meet project objectives	Impacts for this proposed crossing are designed to the narrowest feasible width for the type of road. The RPO wetland buffers along this segment of the road are reduced, in order to meet the County's Public Road Standards. There are no feasible less environmentally damaging locations of alignments that would meet the objectives of constructing a Mobility Element road as any of these alternatives would have to cross the same RPO wetland. State law requires the development of the County's Mobility Element Network, in order to accommodate the land uses proposed in the General Plan. The General Plan anticipated that even though only a portion of the Mobility Network was currently in place, the remainder would be constructed as development proceeded. Therefore, the construction of West Lilac Road in connection with this project is important in ensuring that the Network is developed in order to adequately support the uses designed in the Land Use Map at build-out.	Impacts at this proposed crossing are designed to the narrowest feasible width for the type of road; the crossing is located at an existing road crossing which helps to minimize impacts to RPO wetlands. The RPO wetland buffers along this segment of the road are reduced, in order to meet the County's Public Road Standards. There are no feasible less environmentally damaging locations of alignments that would meet the objectives of constructing a Mobility Element road as any of these alternatives would have to cross the same RPO wetland. State law requires the development of the County's Mobility Element Network, in order to accommodate the land uses proposed in the General Plan. The General Plan anticipated that even though only a portion of the Mobility Network was currently in place, the remainder would be constructed as development proceeded. Therefore, the construction of West Lilac Road in connection with this project is important in ensuring that the Network is developed in order to adequately support the uses designed in the Land Use Map at build-out.
Where the facility or project encroaches into wetland or floodplain, mitigation measures are required that result in any net gain in the wetland and/or riparian habitat.	Mitigation is proposed for the impacts to RPO wetlands from this crossing at a 3:1 ratio. This mitigation ratio will ensure that there is a net gain in wetland habitat. The wetland mitigation is proposed to be achieved on-site through the establishment new wetland habitat in the southern portion of the project near existing wetlands, and through the enhancement of disturbed wetland areas within the project's Biological Open Space.	Mitigation is proposed for the impacts to RPO wetlands from this crossing at a 3:1 ratio. This mitigation ratio will ensure that there is a net gain in wetland habitat. The wetland mitigation is proposed to be achieved on-site through the establishment of new wetland habitat in the southern portion of the project near existing wetlands, and through the enhancement of disturbed wetland areas within the project's Biological Open Space.
Where the facility or project encroaches into steep slopes, native vegetation will be used to re-vegetate and landscape cut and fill areas	The proposed crossing would not encroach into steep slopes.	The proposed crossing would not encroach into steep slopes.
No mature riparian woodland is destroyed or reduced in size due to otherwise allowed encroachments	The riparian woodland at the proposed crossing is not considered "mature" woodland. The willow habitat at this location has been affected by the adjacent ongoing agricultural activities which has prevented the habitat from forming a mature riparian community.	The riparian woodland at the proposed crossing is not considered "mature" woodland. The willow habitat at this location has been affected by the adjacent ongoing agricultural activities which has prevented the habitat from forming a mature riparian community.

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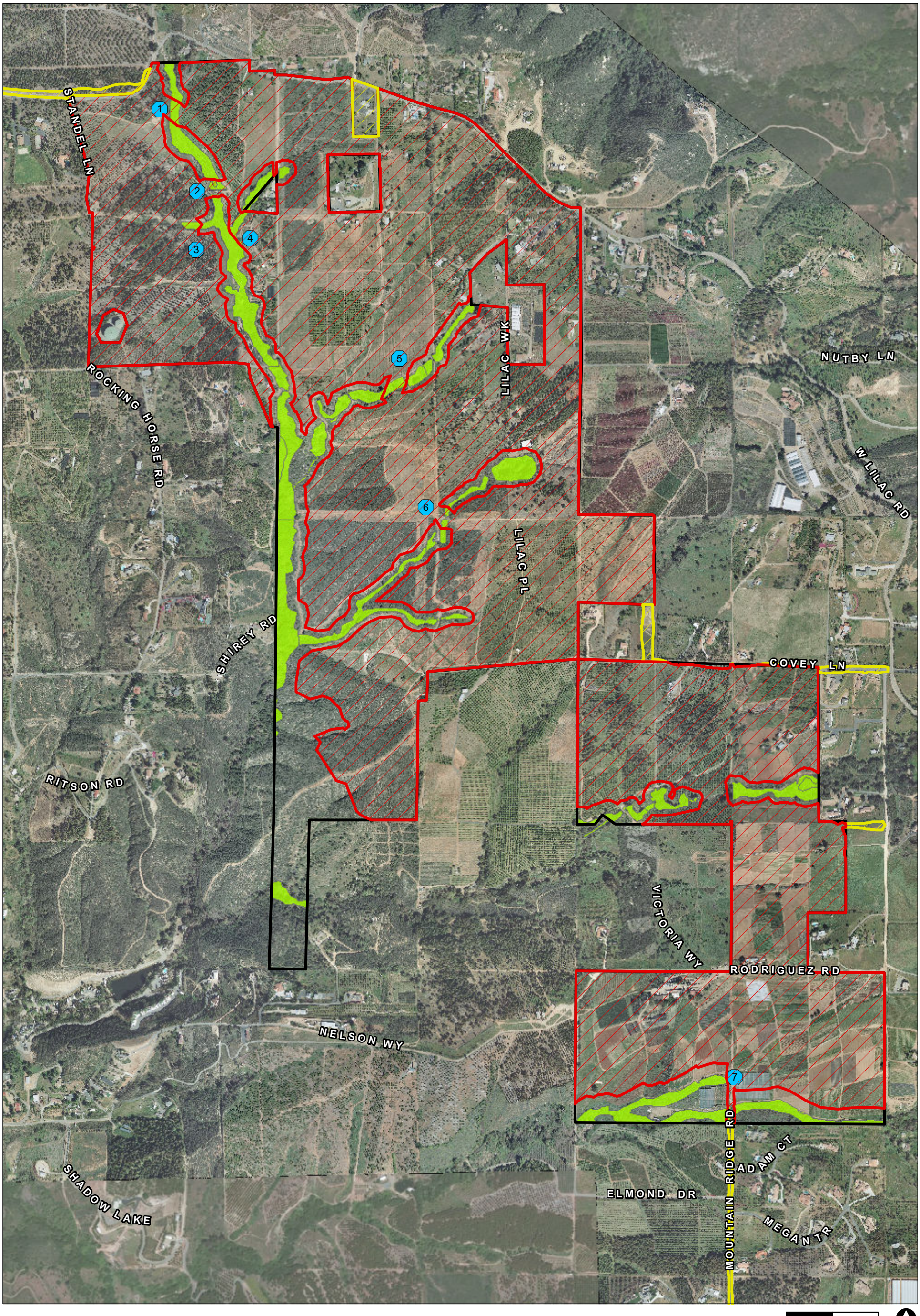

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Project Boundary
Project Impacts
Off-site Improvement Areas
RPO Wetland Crossing
RPO Wetland

ATTACHMENT 15

FIGURE A

Locations of RPO Wetland Crossings

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ATTACHMENT 16

Conceptual Wetland Revegetation Plan

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CONCEPTUAL WETLAND REVEGETATION PLAN
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

PROJECT APPLICANT:
ACCRETIVE INVESTMENTS, INC.
12275 EL CAMINO REAL, SUITE 110
SAN DIEGO, CA 92130
ATTN: JON RILLING
PH: 858-546-0700

PREPARED FOR:
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 RPL3 and 5572 RPL3
MUP 3300-12-005

PREPARER:

GERRY SCHEID
COUNTY-APPROVED BIOLOGIST

RECON ENVIRONMENTAL, INC.
1927 FIFTH AVENUE
SAN DIEGO, CA 92101
619-308-9333

MAY 23, 2013

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TABLE OF CONTENTS

FIGURES

TABLES

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CHAPTER 1.0 DESCRIPTION OF THE DEVELOPMENT PROJECT/IMPACT SITE FOR WHICH COMPENSATORY MITIGATION IS REQUIRED

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.

The proposed project will permanently impact a total of 2.2 acres of Resource Protection Ordinance (RPO) wetland on-site. A 3:1 mitigation ratio is required for impacts to County RPO wetlands. Of this mitigation ratio, a minimum of 1:1 creation must be achieved while the remaining 2:1 of the ratio may be satisfied through restoration/enhancement of existing disturbed wetlands. The proposed on-site mitigation will involve the creation of a minimum of 6.0 acres of wetland and the restoration/enhancement of approximately 12 acres of disturbed wetland habitat. Southern willow riparian habitat is the target vegetation for the wetland creation and the restoration/enhancement of existing disturbed wetlands will involve the removal and control of non-native plant species and the reintroduction of native wetland plant species.

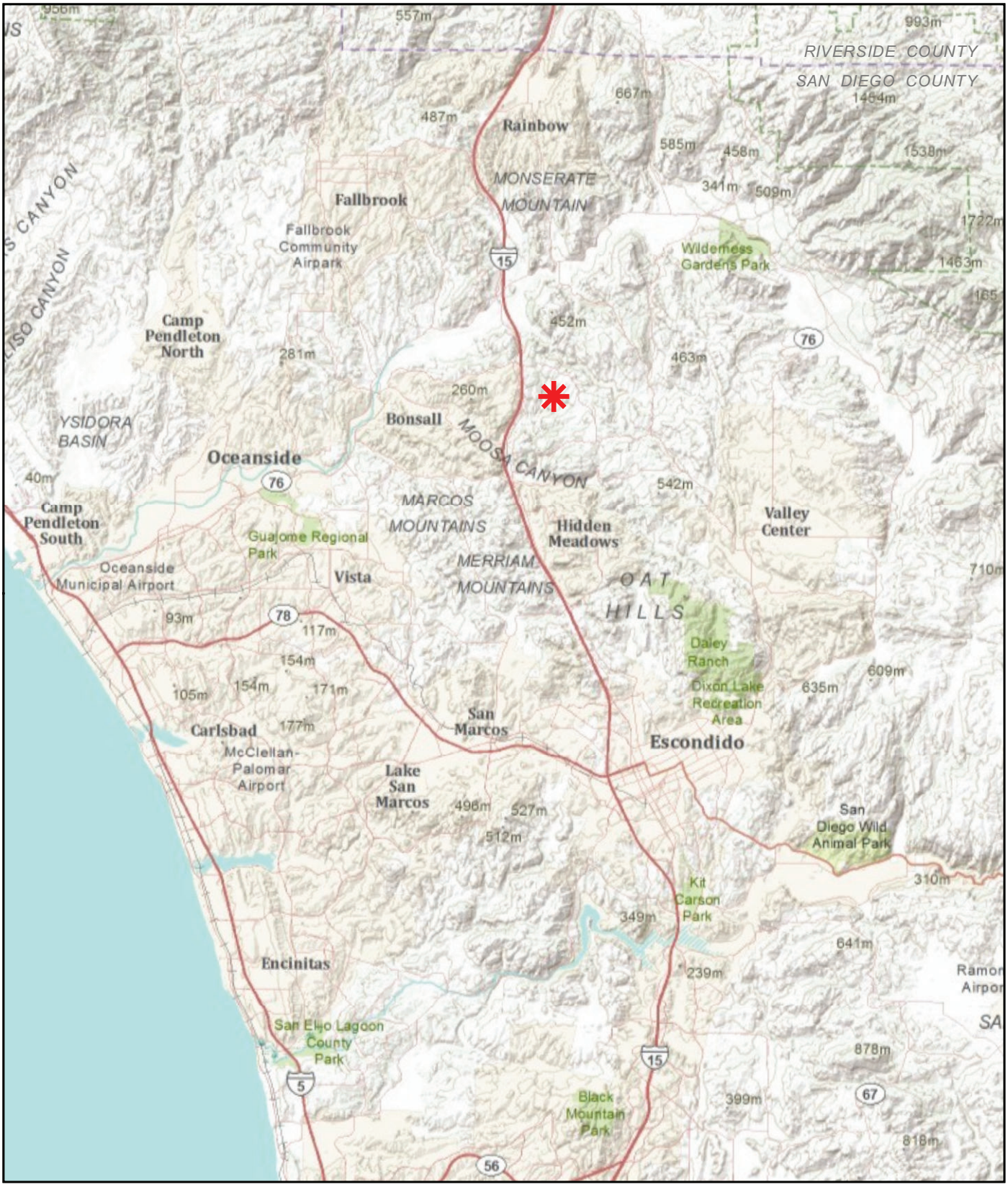
1.1 Responsible Parties

The owner/project proponent will be responsible for the development of the Lilac Hills Ranch project and the funding of the long-term maintenance, monitoring, and remedial actions in relation to the implementation of this revegetation plan. The owner/project proponent shall provide detailed construction drawings, accurate timelines, and written project specifications in conformance with the approved final revegetation plan. The owner/project proponent shall be responsible for coordination between the grading contractor and project biologist to ensure the implementation of the final revegetation plan will occur on the proper schedule.

The owner/project proponent shall manage project activities in the best interest of the project goals. The owner/project proponent will be solely responsible for administration of project contracts. Decisions to stop work are the responsibility of the owner/project proponent and the designated project manager. The owner/project proponent shall have sole authority in decisions to suspend payment or terminate such contracts. This includes all phases of project installation, long-term maintenance, and biological monitoring. The owner/project proponent may, with sole discretion at any time, replace any of these parties if necessary.

1.2 Location of the Development Project

The proposed Lilac Hills Ranch project area is approximately 608 acres composed of 59 contiguous properties and is located in northern unincorporated San Diego County (Location: Thomas Guide 1049 A7, B7; 1069 B1, B2, C1, C2; Figures 1 and 2). The



Project Location

FIGURE 1

Regional Location

RECON

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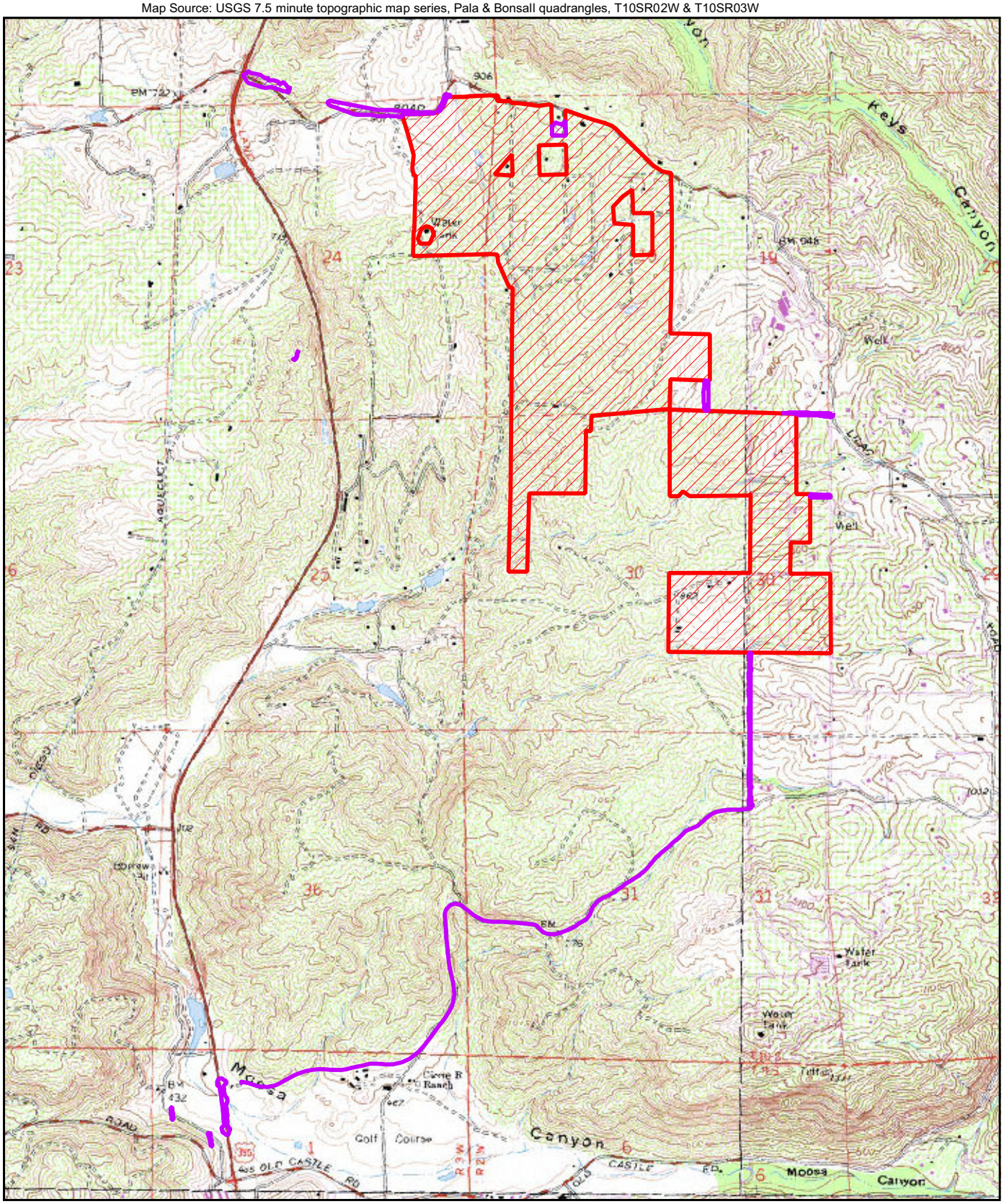
Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



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Project Boundary

Off-site Improvement Areas

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FIGURE 2

Project Location on USGS Map

project occurs within the Bonsall and Valley Center community planning areas. West Lilac Road serves as the northern and eastern boundary of the project site (Figure 3). The western boundary of the project runs along Standel Lane, and Circle R Drive is less than a half-mile south of the project boundary.

The locations of the proposed on-site revegetation work occur along and adjacent to the drainage courses being preserved within biological open space (Figure 4a and 4b). Wetland habitat creation is proposed at a location in the southern portion of the project. Wetland habitat restoration and enhancement areas occur along portions of drainage courses throughout the site.

1.3 Summary of Overall Development Project with Proposed Mitigation

1.3.1 Environmental Setting and Site Conditions

The Lilac Hills Ranch project site consists of approximately 608 acres of inland foothills and valleys. The project site 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. Two agricultural ponds occur in the project area that store water for irrigation purposes.

A total of 17 primary habitat types and vegetation communities were identified in the project survey area and 100-foot buffer survey area (Table 1). Some areas of these habitat types have portions that were characterized as disturbed.

TABLE 1
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

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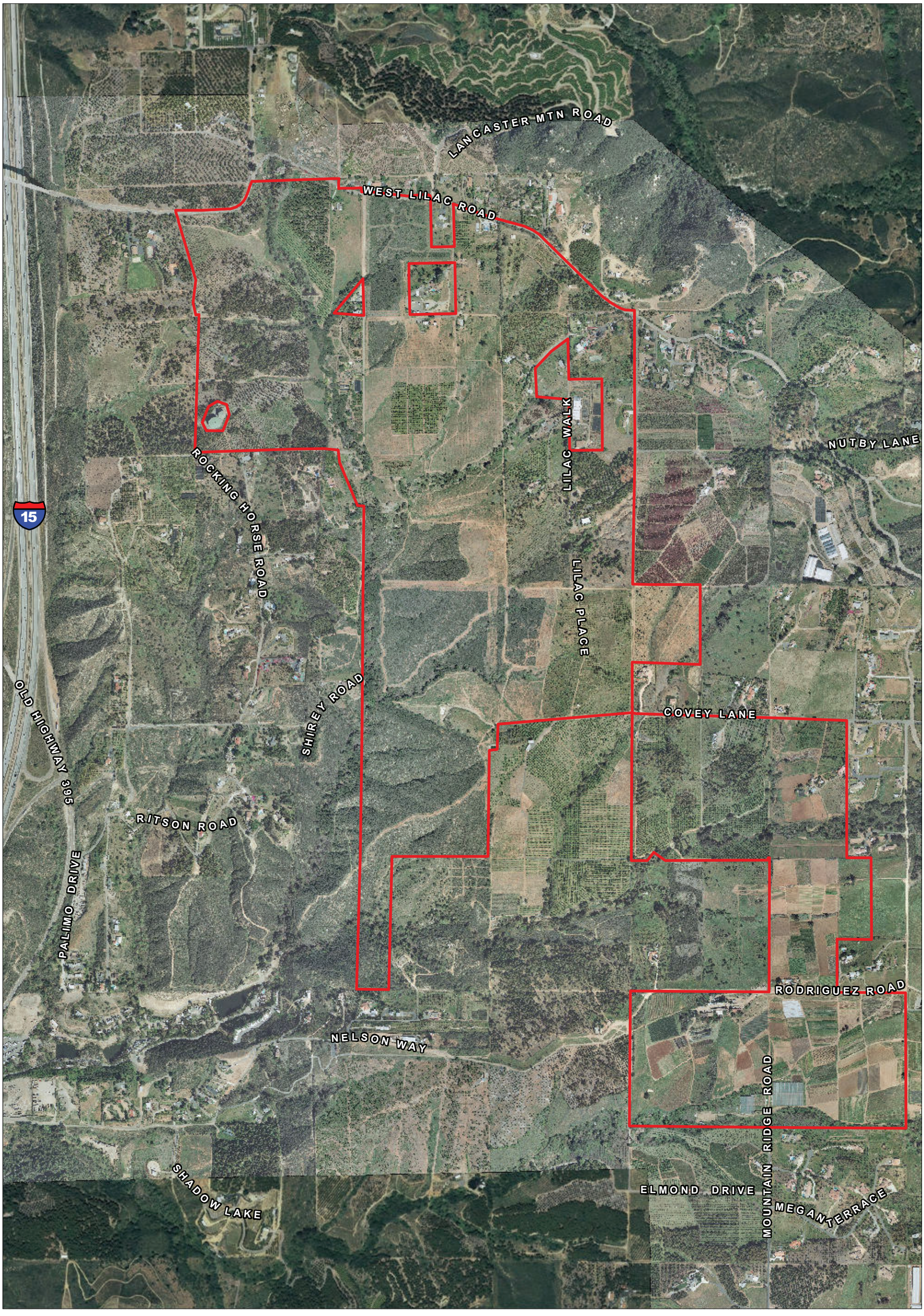

Project Boundary

FIGURE 3

Project Location on Aerial Photograph

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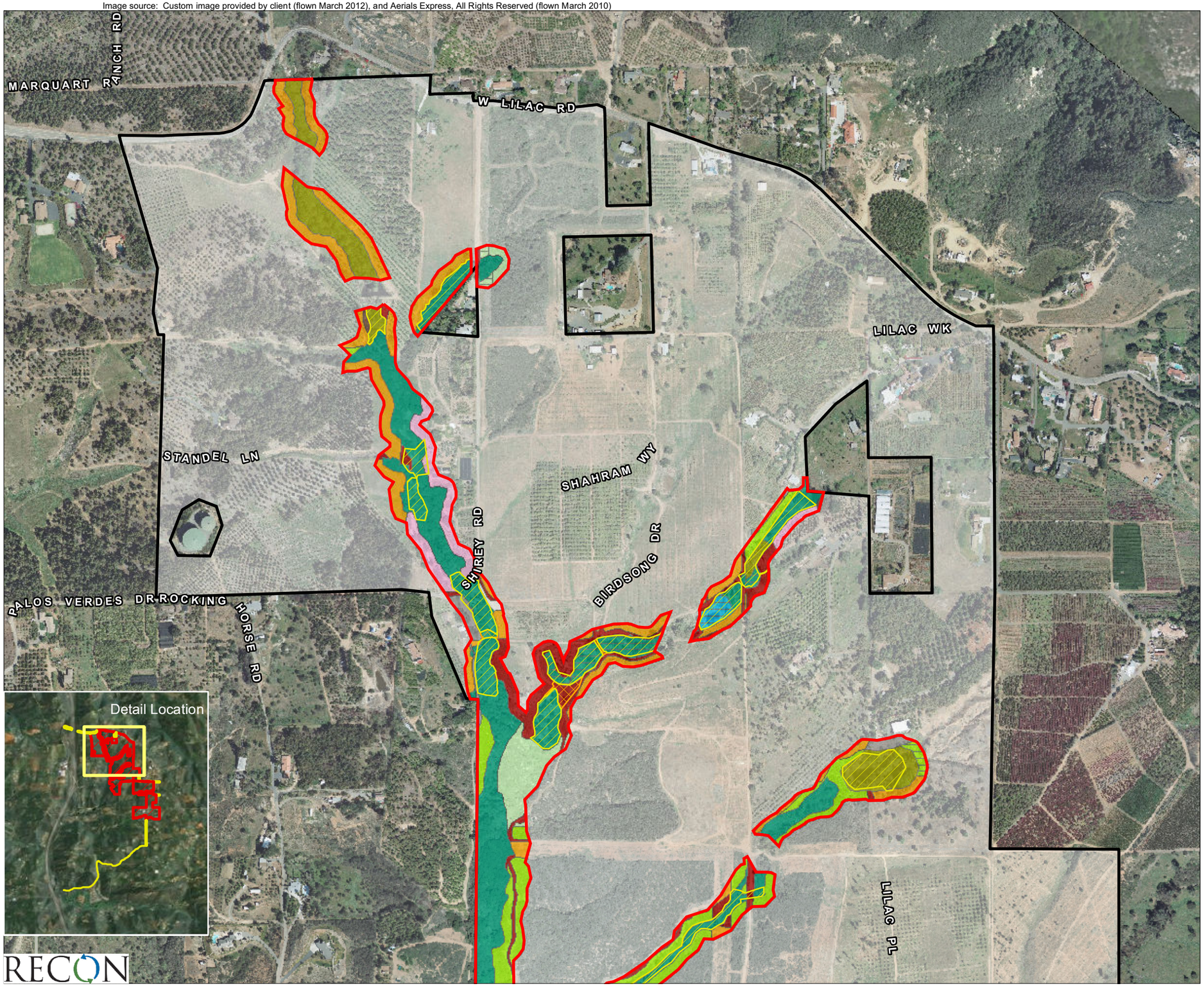

- Project Boundary
- Biological Open Space Boundary
- Wetland Creation
- Wetland Enhancement

Vegetation Communities and Landcover Type

- Coastal Sage Scrub (32520)
- Disturbed Coastal Sage Scrub (32520)
- Disturbed Coastal/Valley Freshwater Marsh (52410)
- Eucalyptus Woodland (79100)
- 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 Riparian Woodland (62500)
- Intensive Agriculture - Nursery
- Orchard (18100)
- Vinyard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

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FIGURE 4a

Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation

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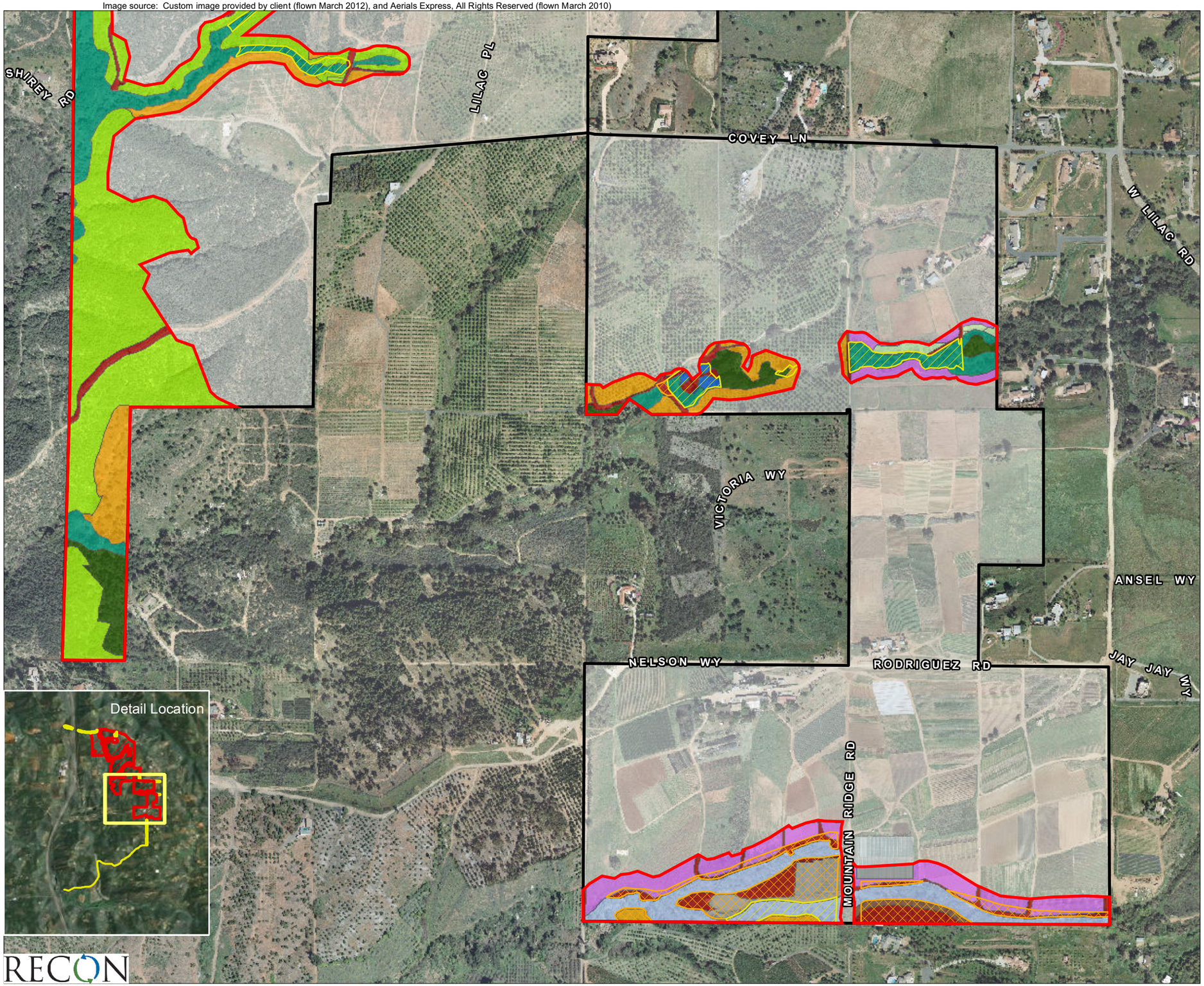

- Project Boundary
- Biological Open Space Boundary
- Wetland Creation
- Wetland Enhancement

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)
- 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)
- Extensive Agriculture - Row Crops (18320)
- Orchard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

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FIGURE 4b

Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation

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The habitats in the project area support a diverse assemblage of wildlife species, with 59 bird, 18 invertebrate, 3 amphibian, 10 reptile, and 7 mammal species identified in the project area. A total of 13 sensitive species were observed in the project area—red diamond rattlesnake (*Crotalus ruber*), Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), coastal western whiptail (*Cnemidophorus multiscultatus tigris*), Cooper's hawk (*Accipiter cooperii),* white-tailed kite (*Elanus leucurus*), turkey vulture (*Cathartes aura*), loggerhead shrike (*Lanius ludovicianus*), yellow warbler (*Dendroica petechia*), yellow-breasted chat (*Icteria virens auricollis*), western bluebird (*Sialia mexicana occidentalis*), southern mule deer (*Odocoileus hemionus fuliginata*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and San Diego desert woodrat (*Neotoma lepida intermedia*).

A total of three sensitive plant species were observed in the project area—prostrate spineflower (*Chorizanthe procumbens*), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), and Engelmann oak (*Quercus engelmannii*). All three species occur on List D of the County sensitive species list. Additionally, Engelmann oak has a California Native Plant Society (CNPS) rare plant ranking of 4.2.

For a complete discussion of the existing biological resources and project impacts, see the Biological Resources Report for Lilac Hills Ranch (RECON 2013).

1.3.2 Project Impacts Resulting in Revegetation Requirement

The proposed project would impact jurisdictional waters, including wetlands, across the site. These impacts to jurisdictional waters and wetlands require revegetation to meet the mitigation requirements to compensate for the impacts. Jurisdictional waters and wetlands covered under the authority of the U.S. Army Corps of Engineers (USACE; waters of the U.S.), California Department of Fish and Game (CDFG; waters of the state), Regional Water Quality Control Board (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 2.

TABLE 2
SUMMARY OF DIRECT IMPACTS TO
JURISDICTIONAL WATERS WITHIN THE PROJECT AREA
(acres)

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 Jurisdiction[1]	**43.52**	**6.55**	**0**
County of San Diego RPO Wetlands	**37.64**	**2.23**	**0**

Functions and values of habitat to be impacted vary with the particular location of impact. The majority of impacts to wetlands would be due to road crossings needed for transportation circulation within the project. Impacts to other non-wetland jurisdictional

waters would result from general project grading. In general, the habitats supported by these jurisdictional waters and wetlands function to provide wildlife habitat for local animal species, erosion control, and provide water quality benefits (i.e., uptake of pollutants). Habitat value for the jurisdictional waters and wetlands are overall moderate, but range from low values for areas affected by adjacent agricultural activities to high values for the larger, mature riparian woodlands.

CHAPTER 2.0 GOALS OF THE COMPENSATORY MITIGATION PROJECT

2.1 Responsibilities

The owner/project proponent will be responsible for funding long-term maintenance, monitoring, and remedial actions as determined by the County. The owner/project proponent shall provide detailed construction drawings, accurate timelines, and written project specifications in conformance with the approved final revegetation plan. The owner/project proponent shall be responsible for coordination between the grading contractor and project biologist to ensure the implementation of the final revegetation plan will occur on the proper schedule.

The owner/project proponent shall manage project activities in the best interest of the project goals. The owner/project proponent will be solely responsible for administration of project contracts. Decisions to stop work are the responsibility of the owner/project proponent and the designated project manager. The owner/project proponent shall have sole authority in decisions to suspend payment or terminate such contracts. This includes all phases of project installation, long-term maintenance, and biological monitoring. The owner/project proponent may, with sole discretion at any time, replace any of these parties if necessary.

The County of San Diego (County) will be responsible to ensure that the revegetation plan is implemented according to the agreed requirements and schedule. The County, in coordination with other resource agencies, will have final approval authority in determining the success of the revegetation effort in relation to meeting the success criteria for the compensatory mitigation.

2.1.1 Project Designer

The preparation of the construction drawings and landscape plans used to implement the wetland revegetation plan shall be the responsibility of a qualified engineer and landscape architect. The project engineer and landscape architect shall consult with the project biologist during the preparation of the construction/landscape plans to ensure that the site preparation grading, plant palettes, plant installation instructions, and maintenance/monitoring requirements outlined in the final wetland revegetation plan are incorporated into the plans.

2.1.2 Installation Contractor

The installation contractor shall be responsible for the implementation of the project construction (e.g., site preparation) and landscape plans (e.g., plant installation). The installation contractor shall have a minimum of five years of experience in the revegetation, restoration, and enhancement of native wetland plant species and habitat.

2.1.3 Revegetation Monitor

The revegetation monitor will be responsible for monitoring and consulting on the implementation of the revegetation plan. The revegetation monitor shall be a biologist with a minimum of five years of experience in the revegetation, restoration, and enhancement of wetland plants and habitats. The revegetation monitor responsibilities shall include:

- Coordinate with the project engineer and landscape architect during the preparation of the construction plans to be used to implement the final wetland revegetation plan.

- Attend pre-grading and pre-construction meetings to consult with the owner/project proponent and grading contractor, and to educate the contractors on project goals and habitat sensitivity.

- Monitor the site preparation, installation of native plant materials, and monitoring of qualified subcontractors in execution of aspects of this plan.

- Consult with the contractor on any activities that may be disruptive to the mitigation.

- Overseeing and performing the required biological monitoring and reporting in accordance with the procedures established in this plan.

2.1.4 Revegetation Maintenance Contractor

The revegetation maintenance contractor shall have a minimum of five years' experience in upland and stream/wetland habitat restoration. The maintenance contractor will be responsible for implementing the tasks outlined in this plan under the supervision of the project biologist.

- Maintain site as outlined in this plan in coordination with the project biologist.

- Perform remedial measures as prescribed by the project biologist and approved by the owner/project proponent (e.g., control non-native plants, plant supplemental native plants, repair irrigation system, remove trash, etc.).

2.2 Type(s) and Area(s) of Habitat to be Established, Revegetated, Restored, Enhanced, and/or Preserved

2.2.1 Revegetation Design Concept

One element of the revegetation design concept for this wetland revegetation plan is the creation of wetlands on-site in an area that will add to existing wetlands. The purpose of this wetland creation is to replace functions and habitat values lost by impacts to jurisdictional wetlands. The term creation implies a newly constructed wetland area that aims to replace habitat functions and values of the impacted wetland. The quality of the created habitat will exceed that of the existing impacted wetland habitat. A total of 6.0 acres of wetland/riparian habitat will be created on-site in the southern portion of the project area. A breakdown of habitat types and mitigation required is given in Table 3.

TABLE 3
SUMMARY OF WETLAND IMPACTS AND MITIGATION

Vegetation Community	Agency Jurisdiction	Impact (acres)	Mitigation Ratio	Total Mitigation Requirement (acres)
Southern Coast Live Oak Riparian Woodland (61310)	ACOE, CDFG, County of San Diego[1]	1.9	3:1	5.7
Coastal/Valley Freshwater Marsh (52410)	ACOE, CDFG, County of San Diego[1]	0.2	3:1	0.6
Southern Willow Riparian Woodland (62500)	ACOE, CDFG, County of San Diego[1]	0.5	3:1	1.5
Mule Fat Scrub (63310)	ACOE, CDFG, County of San Diego[1]	0.1	3:1	0.3
Southern Willow Scrub (63320)	ACOE, CDFG, County of San Diego[1]	0.6	3:1	1.8
Disturbed Wetland (11200)	ACOE, CDFG, County of San Diego[1]	0.1	3:1	0.3
Non-wetland Waters/Streambed	ACOE, CDFG	3.1	1:1	3.1
TOTAL		**6.5**		**13.3**

[1]Where RPO wetlands occur.

The second element of the revegetation design concept for this wetland revegetation plan is the restoration/enhancement of existing disturbed wetlands being preserved in biological open space in the project area. The purpose of the restoration/enhancement is to increase the functions and values of the existing disturbed riparian habitat on-site. Enhancement activities will include the removal of non-native species, planting of native species, restoration of hydrological connections, and removal of trash. This mitigation would provide an increase in habitat values beyond extant conditions. A total of 12 acres of preserved wetland/riparian habitat will be restored/enhanced within the biological open space.

2.2.2 Agency Coordination

Agency coordination (i.e., USACE, CDFG, RWQCB) will occur as project design is completed and the final impacts are approved by the County of San Diego. Permit conditions and requirements of other resource agencies will be provided once consultation with these agencies has occurred. An environmental impact report is being prepared for this project, which will include a copy of this conceptual wetland revegetation plan, when approved.

2.3 Functions and Values

The establishment of wetland habitat in the southern portion of the project site will increase the habitat functions and values of the adjacent riparian habitat that is being preserved at the location. The added acreage of wetland habitat will increase the value of the riparian corridor for wildlife species by providing additional habitat structure for nesting, feeding, and shelter. Increased erosion protection, decreased sedimentation, better nutrient and pollutant uptake, and a more stable hydrologic regime are habitat functions that will benefit from the additional established wetlands.

The restoration and enhancement of the wetlands and riparian habitat along the drainage courses being preserved as part of the project will also benefit the existing functions and values of these habitat areas. Removal of invasive plant species such as

pampas grass and giant cane, in conjunction with the removal of trash and the restoration of hydrologic connections through the elimination of existing road crossings no longer needed will increase the value of the habitat for wildlife. Restoring the disturbed areas with native riparian plant species will improve erosion control, decrease sedimentation, improve nutrient cycling and pollutant absorption, and improve the hydrologic functions of the drainage systems.

2.4 Time Lapse

Implementation of compensatory mitigation for impacts to wetlands will occur in the same calendar year as the impacts occur. It is expected to take five years after implementation of the revegetation effort to achieve compensatory mitigation success.

2.5 Cost

The cost estimate for wetland revegetation program will be determined once project approvals have been received from the County of San Diego.

CHAPTER 3.0 DESCRIPTION OF THE PROPOSED COMPENSATORY MITIGATION SITE

3.1 Site Selection

Suitability of the proposed revegetation areas for wetland creation and restoration/enhancement was based on factors including physical factors (i.e., soils, landscape position, hydrology, topography), biological factors (i.e., existing vegetation, adjacent wetland habitat), logistical factors (i.e., accessibility, site protection), and historical factors (i.e., suitability of the site for restoration). All creation and restoration/enhancement areas will be conserved in biological open space as part of the proposed Lilac Hills Ranch project.

3.1.1 Physical Factors

The soils in the wetland creation areas are likely suitable for the establishment of riparian vegetation as they are adjacent to areas of existing riparian vegetation on the same soil type. It is important that in areas where the ground elevations will be lowered that the upper 12 inches of topsoil be removed, stockpiled separately, and then spread over the graded creation site to ensure good topsoil for establishment of the native vegetation to be installed. However, should it be determined during site preparation that suitable topsoil is not present on-site, the project biologist will determine the soil amendments and/or additives (i.e., fertilizer, mycorrhiza, organic matter) to be added prior to installation of the native plant materials.

It is assumed that soils in the wetland restoration/enhancement areas are suitable for the establishment of riparian vegetation as these areas already support native riparian plants. The use of soil amendments or additives, such as fertilizer or mycorrhiza, is not anticipated for these areas.

The wetland creation areas will be located adjacent to existing southern willow riparian habitat in the southern portion of the Lilac Hills Ranch project area (see Figures 4a and 4b). Creation of wetland will occur in areas adjacent to the existing riparian habitat in

areas that are currently characterized as disturbed, developed, or under extensive agriculture. Contouring during site preparation will lower the topography of the creation areas to spread out existing surface flows and to bring the elevation of the site closer to the groundwater table to ensure adequate surface and subsurface hydrologic connections to support the new wetland vegetation after supplemental irrigation is removed. The elimination of adjacent agricultural activities and the maintenance of natural freshwater inputs will reduce/eliminate any salinity issues.

The location of the wetland restoration/enhancement areas will occur in existing drainages that contain disturbed southern coast live oak riparian woodland dominated by pampas grass and other invasive plant species. It is assumed that the existing drainages contain suitable hydrology to support the restored/enhanced southern coast live oak riparian woodland vegetation due to the existing natural surface and subsurface hydrology.

3.1.2 Biological Factors

The wetland creation areas are proposed to be constructed adjacent to an existing drainage course that supports similar riparian habitat. After the initial installation of the native plant materials, the site will be maintained for a period of five years to control invasion of the site by non-native plant species and to increase the resiliency of the riparian habitat to resist future invasions by these non-native species. Use of the existing riparian habitat by wildlife will benefit from the addition of more riparian habitat. Restoration and enhancement of preserved riparian habitat in the biological open space areas of the project contain suitable native riparian habitat.

3.1.3 Logistical Factors

The wetland creation areas are located in an area in the southern portion of the project site where accessibility will not be an issue during the implementation, maintenance, and monitoring period. Restoration and enhancement areas that occur throughout the site will have easy access for the removal of non-native plants species, reintroduction of native plant species, and maintenance and monitoring. Site protection during the establishment, restoration, and enhancement of the riparian habitats will be achieved through the use of signage and fencing that will restrict access to the mitigation areas. Long term site protection will be enforced by the entity approved to manage the biological open space areas within the project.

3.1.4 Historical Factors

The proposed wetland creation areas will be located in areas adjacent to existing riparian habitat where past and current agricultural activities have removed native habitat over time. A low elevation landscape position with minor topographic modifications will create a local environment that has the hydrology and soils characteristics conducive to the establishment of wetland/riparian habitat.

3.2 Location and Size of Compensatory Mitigation Site

The proposed on-site compensatory mitigation will involve the creation of a minimum of 6.0 acres of wetland and the restoration/enhancement of approximately 12 acres of disturbed wetland habitat. Southern willow riparian habitat is the target vegetation for the

wetland creation revegetation sites that will be located in the southern portion of the project site (see Figure 4b). The sites where restoration/enhancement of existing disturbed wetlands will occur are located along drainage courses throughout the project site that are being preserved (see Figures 4a and 4b) and will involve the removal and control of non-native plant species and the reintroduction of native wetland plant species.

3.3 Functions and Values

The baseline condition of the proposed wetland creation areas is land that has been disturbed by agricultural activities. Current habitat functions and values of the areas where wetland will be established are low due to the lack of native plant species. Non-native plant species, primarily row crops, and a lesser amount of weed species (less than 10 percent cover) dominate the area. Native plant and animal species diversity is relatively low in the agricultural fields.

Restoration and enhancement areas occur on existing drainages that support riparian habitats such as southern coast live oak riparian woodland. Habitat functions and values are those described above in Section 2.3. Native plant cover is generally high, except in portions of the drainages where invasive species have colonized localized areas.

3.4 Jurisdictional Delineation

A jurisdictional delineation was conducted within the Lilac Hills Ranch project site (RECON 2012). The area where wetland creation will occur is an upland area. Drainages and riparian habitat being preserved in open space are either wetland, riparian, or consist of upland vegetated non-wetland waters.

3.5 Present and Proposed Uses

Presently, the proposed revegetation creation site and adjacent land is zoned for agricultural use and is actively being planted with a rotation of row crops. The drainages containing the proposed restoration/enhancement areas are also in an area zoned for agricultural use; however, the drainages are adjacent to active agricultural operations (i.e., orchards, nursery crops, etc.) and are only indirectly affected by this land use (e.g., trash, irrigation runoff, invasive species, road crossings).

All wetland revegetation creation, restoration, and enhancement areas that are part of this revegetation plan will be within the biological open space dedicated as part of the project approval. The biological open space containing the revegetation areas and other habitat types being preserved will be protected under a covenant of easement. Signage will be used to delineate the preserved biological open space areas to limit damage from human encroachment on the preserved habitats (Figure 5).

3.6 References Site(s)

A nearby reference site for the southern willow riparian wetland creation area will be selected by the project biologist prior to the start of construction. The reference community will be chosen based on proximity to the project site and similarity, based on slope, aspect, and soils. Characteristics of the reference site will be used to track the

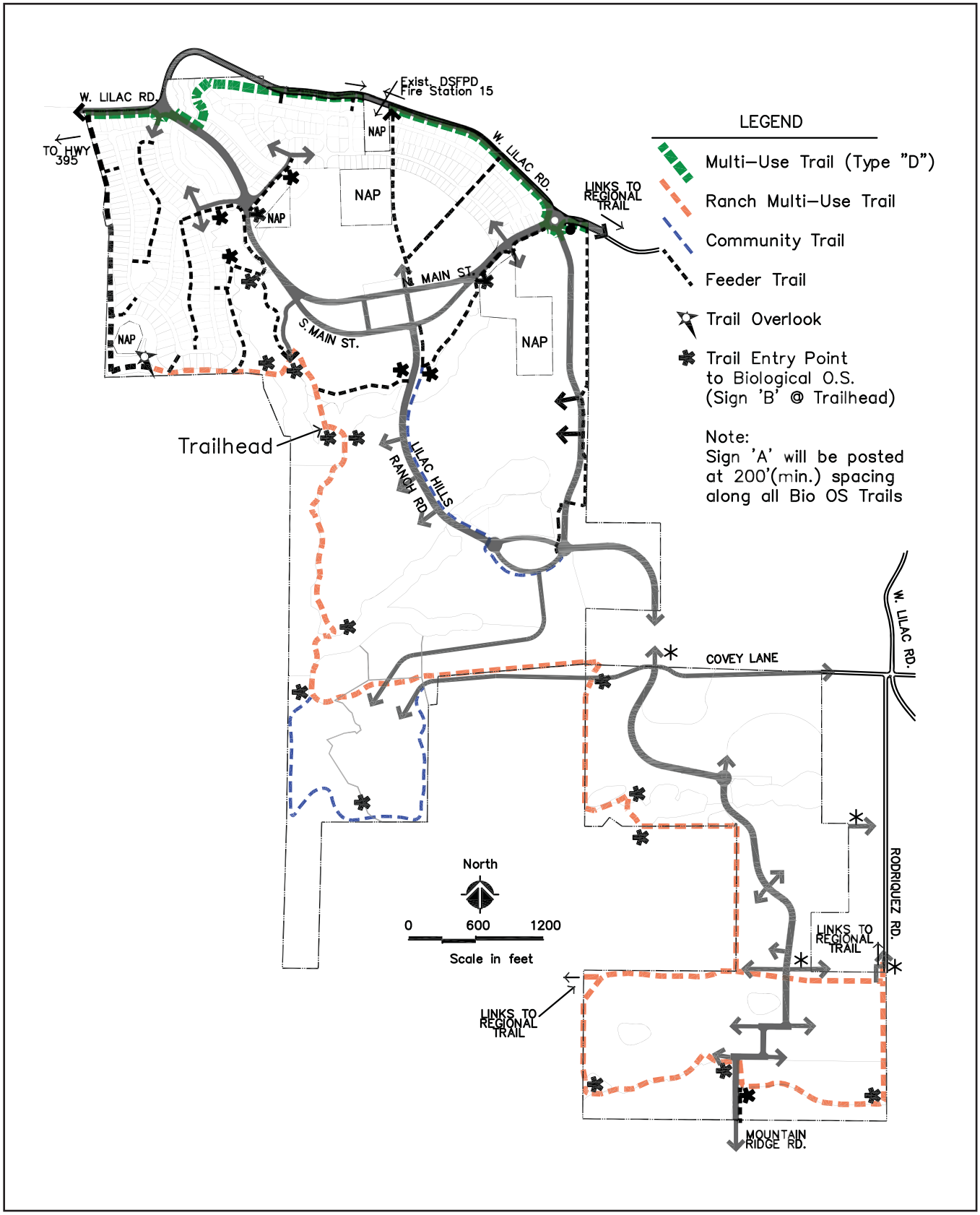

FIGURE 5
Biological Open Space Plan

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progress of the habitat development of the mitigation areas during the five-year maintenance and monitoring period.

The southern portion of the project area currently supports southern willow riparian habitat that will be adjacent to the wetland creation areas. This willow riparian habitat is appropriate to serve as the reference area for the wetland creation (see Figure 4b). Native species cover is relatively high, invasive species cover relatively low, and species diversity of native plants and animals is moderate under current conditions.

A site visit with staff from the County of San Diego will be required for final approval of the reference site. Once the reference site is approved, it will be sampled once using the same qualitative and quantitative methods to be used on the wetland creation sites with enough sample replication to adequately capture the desired habitat characteristics. Baseline data for the percent native plant cover, percent non-native plant cover, and native plant density/diversity will be collected on the reference site. This baseline information will be used for comparison to the similar data collected for the vegetation at the wetland creation site.

CHAPTER 4.0 IMPLEMENTATION PLAN FOR THE COMPENSATORY MITIGATION SITE

4.1 Rationale for Expecting Implementation Success

The rationale for expecting implementation success for the proposed revegetation project to meet compensatory mitigation requirements is based on the location and characteristics of the revegetation sites. The establishment of wetland/riparian vegetation will occur adjacent to an existing drainage course that supports similar riparian habitat. The active floodplain of the drainage course will be widened to provide the needed surface flows and these flows in conjunction with the relatively high groundwater levels at this location will provide the hydrology to support wetland/riparian vegetation growth. Soils at this location are similar to those currently supporting wetland/riparian habitat. Revegetation areas where restoration and enhancement will occur are located on existing drainage courses that support wetland/riparian vegetation. These areas contain the necessary soils and hydrology to support wetland/riparian vegetation.

4.2 Financial Assurances

The project proponent/owner at the time of implementation of this revegetation plan will be responsible for providing all necessary funds to cover costs associated with the requirements of the revegetation plan. Sufficient funds will be provided to cover the implementation of the plan (e.g., site preparation, control of non-native plants, native plant installation, etc.), the five-year maintenance and monitoring program, any remedial measures required, and report preparation. A revegetation agreement shall be signed and notarized by the property owner following approval of this revegetation plan and accompanied by the required security as agreed upon by the County of San Diego.

4.3 Schedule

The schedule for the implementation of the required mitigation outlined in this plan has yet to be determined.

4.4 Site Preparation

The planting of native riparian plants should occur in the winter or spring months to take advantage of natural rainfall and optimal native plant growing conditions. Work in each of the wetland revegetation areas will be commenced prior to or concurrent with the development phase that requires mitigation for impacts to wetlands. The final wetland revegetation plan will provide more specific start and completion dates by phase for the implementation of the wetland revegetation program.

The wetland creation areas will require minor grading to lower the existing topography to expand the active floodplain of the existing drainage course. Site preparation will require the use of standard grading equipment (i.e., bulldozer, backhoe, excavator, etc.) to recontour the revegetation areas to the desired elevations and grade. Some restoration/enhancement areas may require the use of a small bulldozer or excavator to help remove heavy infestations of non-native plants. The addition of seed to the revegetation sites will be either hand broadcast or sprayed from a hydroseed truck. Access to the wetland creation and restoration/enhancement areas will be provided by way of existing roads and/or overland travel through adjacent areas during mass grading for the project. Access will not require additional impacts to wetland vegetation.

Prior to grading for the wetland creation site and for restoration/enhancement activities in existing disturbed riparian areas, any existing sensitive biological resources not authorized for impacts will be flagged and monitored for avoidance during construction. A limit fence delineating the grading limits or limits of restoration/enhancement activities will be installed to demarcate and further protect the adjacent sensitive habitat.

Once the revegetation project is complete, the wetland revegetation sites will be part of the biological open space conserved as part of the Lilac Hills Ranch project. This open space will have an easement restricting land use within the open space areas. Perimeter barriers associated with the proposed development are expected to limit access to the habitat creation areas. Protective fencing, gates, and signage will be used to identify sensitive biological resource areas and encourage pedestrians to stay on identified trails.

During and after site preparation, appropriate best management practices (BMPs) will be used as needed to prevent sediment from moving off-site. These BMPs will be included in the revegetation site grading plans and Storm Water Pollution Prevention Plan (SWPPP) for the project. If fiber rolls or straw bales are used, rice straw is recommended over wheat straw because it is less likely to carry imported seed, which can grow and reproduce in the mitigation sites.

Control of invasive exotic weeds will be important, during both establishment and the long-term maintenance period, to achieving the final performance standards. During the revegetation site preparation stage, weeds may be removed by hand, mechanical means, or sprayed with herbicide prior to planting to eradicate and prevent the establishment of weed species prior to the installation of the native plant species. A pre-emergent herbicide will be used in the revegetation areas in order to prevent the germination of weed species contained in the topsoil. For both the site preparation stage and the plant establishment and long-term maintenance stages, the project biologist will be responsible for directing the appropriate timing and application of any herbicides. An herbicide approved for use in aquatic sites will be used when appropriate for weed

control and applied by a licensed applicator. When herbicide is used, there must be little to no wind present, as overspray may potentially harm native plants.

The wetland creation and restoration/enhancement program will make use of rooted cuttings and plant materials collected from the local vicinity, as well as nursery-grown container plants grown from locally collected seed and/or cuttings. The native plants recommended for the container stock in this plan were selected based on their presence in the reference site and their value for developing an appropriate vegetation community structure to support wildlife species.

Cuttings and seed used to produce plants for the project will be collected from existing riparian areas on the project site or within two miles of the project site when feasible. All cuttings will be rooted in one-gallon containers and inoculated with mycorrhiza prior to planting. Cuttings and container plant densities for the wetland/riparian vegetation types are presented in Tables 4 and 5. Plants shall be spaced on a 3-foot radius across the revegetation areas.

TABLE 4
WETLAND CREATION AREA CONTAINER STOCK
SOUTHERN WILLOW RIPARIAN HABITAT SPECIES AND
DENSITIES PER ACRE

Species	Size	Number/Acre
Artemisia douglasii Mugwort	1-gallon	25
Baccharis salicifolia Mule fat	1-gallon	100
Iva hayesiana San Diego marsh elder	1-gallon	50
Oenothera elata ssp. *hookeri* Hooker's evening primrose	1-gallon	25
Rosa californica Wild rose	1-gallon	25
Rubus ursinus Wild blackberry	1-gallon	25
Salix gooddingii Black willow	1-gallon	100
Salix exigua Narrow-leaved willow	1-gallon	50
Salix laevigata Red willow	1-gallon	75
Salix lasiolepis Arroyo willow	1-gallon	150
TOTAL		625

TABLE 5
RESTORATION/ENHANCEMENT AREA CONTAINER STOCK
SOUTHERN COAST LIVE OAK RIPARIAN WOODLAND SPECIES
AND DENSITIES PER ACRE

Species	Size	Number/Acre
Artemisia douglasii Mugwort	1-gallon	25
Baccharis salicifolia Mule fat	1-gallon	100
Iva hayesiana San Diego marsh elder	1-gallon	50
Oenothera elata ssp. *hookeri* Hooker's evening primrose	1-gallon	25
Rosa californica Wild rose	1-gallon	25
Rubus ursinus Wild blackberry	1-gallon	25
Salix gooddingii Black willow	1-gallon	100
Salix exigua Narrow-leaved willow	1-gallon	50
Salix laevigata Red willow	1-gallon	75
Salix lasiolepis Arroyo willow	1-gallon	150
Quercus agrifolia Coast live oak	1-gallon	150
TOTAL		775

4.5 Planting Plan

Installation of native plants will begin upon completion of site preparation (i.e., grading, initial weed control) for both creation and restoration/enhancement sites. Individual container plants will be distributed on approximately three-foot centers within a particular revegetation site under the direction of the project biologist and in a manner that approximates the natural distribution of the target vegetation community.

Installation of native plant container stock will be in holes dug to be twice the area of the container and twice as deep. The holes will be partially backfilled and then will receive approximately one gallon of water prior to planting to wet and settle the soil. Plants will then be placed in the holes, backfilled with topsoil, and watered. No fertilizers will be used.

4.6 Irrigation Plan

A temporary surface-mounted overhead spray irrigation system will be installed at each wetland creation area to improve the survival of plantings during the first two to three years of establishment. Supplemental water will be added to the revegetation sites under the direction of the revegetation monitor. The temporary irrigation system will be removed as directed by the revegetation monitor once the plants have become firmly established.

CHAPTER 5.0 MAINTENANCE DURING MONITORING

5.1 Maintenance Activities

The objective of the maintenance program is to ensure that the irrigation system functions properly, weeds are controlled in a timely and thorough manner, and repairs/remedial measures are implemented per the direction of the revegetation monitor. The long-term maintenance for all habitat creation and restoration/enhancement areas will begin when the installation of the native plants is complete and will last for a period of five years as presented. The maintenance program will ensure that debris removal, weed control, replanting and reseeding, site protection, and other tasks are adequately performed. The revegetation monitor will supervise maintenance activities for all mitigation areas.

5.1.1 Supplemental Irrigation

A temporary irrigation system will be installed to ensure survival of plantings as a supplement to natural rainfall inputs. In general, the site will be watered on an as-needed basis, but typically two to three times a week during the warmer spring and summer months. The revegetation monitor will provide recommendations for timing and duration of the application of supplemental water. It is expected that the irrigation system will be used for a period of two to three years depending on seasonal rainfall patterns and how well the target vegetation becomes established. During this time, the maintenance crews should keep the irrigation system in operating condition. Upon completion of the project, the maintenance crews shall remove all above-ground irrigation equipment. Below ground mainlines may be left in place so the soil is not disturbed.

5.1.2 Weed Control

Weed control will continue throughout the five-year monitoring period. Hand weeding or other weed control methods will be performed by maintenance workers familiar with and trained to distinguish weeds from native species. During the first three years after plant installation, weeding will be performed at each revegetation site a minimum of four times a year to keep weeds from producing seeds and to control weed competition during the establishment period of native plants. Weed control will continue up to three times a year for the last two years of the maintenance period.

Weeds will be killed or removed before they set seeds. Appropriate weed control measures will be implemented under the direction of the project biologist. Plant species also present on the Cal-IPC California Invasive Plant Inventory (Cal-IPC 2012) will be targeted for removal. In the event that additional invasive species are encountered, the revegetation monitor shall refine control measures to address the particular infestation.

5.1.3 Native Plant Replacement

The wetland creation and restoration/enhancement revegetation areas will be monitored regularly during the establishment period to identify any areas that have poor plant survival rates. These areas will have the native plants replanted with the appropriate species once or twice a year throughout the maintenance period to “fill in” these areas. Alternate native plant species may be used if it is determined by the revegetation

monitor that the site may not support the plant species originally installed in that particular location. Replanting shall occur within the growing season.

5.1.4 Vegetation Clearing and Trash Removal

Pruning of any native vegetation or removal of dead wood and leaf litter shall generally not be allowed in the revegetation areas. Trash will be removed from the revegetation sites on an as-needed basis. Trash consists of all man-made materials, equipment, or debris left within the revegetation area that is not serving a function related to revegetation.

5.1.5 Pest Control

If during the five-year monitoring period it is determined by the revegetation monitor that herbivory is resulting in significant damage to target species, an active pest control program will be implemented. The pest control program may include any of the following measures: caging seedlings, fence installation, or trapping of pest species.

5.2 Schedule

The proposed maintenance schedule for the revegetation areas is provided in Table 6.

TABLE 6
FIVE-YEAR MAINTENANCE SCHEDULE

Tasks	Year 1	Year 2	Year 3	Year 4	Year 5
Weed control	4 times per year	4 times per year	4 times per year	3 times per year	3 times per year
Irrigation*	Two to three times per week based on season	Two to three times per week based on season	Two times per week based on season	--	--
Trash removal	4 times per year	4 times per year	4 times per year	3 times per year	3 times per year
Replanting	Twice per year	Once per year	Once per year	Once per year	--

*Temporary irrigation system is anticipated to be removed at the end of Year 3.

CHAPTER 6.0 MONITORING PLAN FOR THE COMPENSATORY MITIGATION SITE

6.1 Performance Standards for Target Dates and Success Criteria

The wetland creation and restoration/enhancement sites will be considered successful when the success criteria/performance standards have been met. If the minimum levels of native plant development shown in Table 7 are not achieved in any year, the project biologist will recommend remedial actions, such as replanting container stock, to reach the following year's expected levels. Other adaptive management actions (e.g., adjustments to site conditions, adjustment of supplemental irrigation, modifications to invasive species control) may be necessary to bring the revegetation areas into compliance with the success criteria/performance standards.

TABLE 7
FIVE-YEAR SUCCES CRITERIA/PERFORMANCE STANDARDS FOR WETLAND CREATION AND RESTORATION/ENHANCEMENT AREAS

Year	Container Plant Survival	Total Native Plant Cover[1]	Diversity[1]	Density[1]
1	80%	–	–	–
2	100%	50%	50%	50%
3	100%	60%	60%	60%
4	100%	75%	70%	70%
5	100%	80%	70%	70%

[1]Measured relative to an appropriate reference site in the project vicinity.

In order to meet the success criteria/performance standards, the wetland revegetation areas must sustain themselves for a minimum of one year (meeting the fifth-year performance standards) in the absence of significant maintenance measures during the final year of monitoring. Significant maintenance includes replanting and eradication of substantial weed infestations. Other maintenance measures, such as minor weed control, may continue until the end of the monitoring period.

The cover of non-native annuals and herbs, as identified by the project biologist, will be no more than 10 percent by the end of the five-year monitoring period. No invasive exotic perennials on the Cal-IPC lists A and B will be permitted on the revegetation sites by the end of the five-year monitoring period.

6.2 Target Functions and Values

The wetland/riparian revegetation mitigation sites will provide habitat functions and values that are equal to or greater than those affected by the project. The wetland/riparian habitat creation areas will increase habitat values (e.g., available habitat for wildlife use, plant community structure) and functions (e.g., erosion control, decrease in downstream sedimentation, increase in nutrient/pollutant uptake) by providing additional acreage of wetland/riparian habitat adjacent to existing wetland/riparian resources. These same habitat functions and values will be increased along portions of other existing wetland/riparian habitats on drainage courses preserved in biological open space through the restoration/enhancement activities that will replace non-native plant infestations and disturbances with native plant cover and restored hydrologic connections.

6.3 Target Hydrologic Regime

The target hydrologic regime for the proposed wetland/riparian revegetation creation areas is comprised of the establishment of connections to existing surface flows and site modifications to allow access to sub-surface groundwater. Minor contour elevation modifications made during site preparation will lower the ground surface in the creation areas to be closer to the existing groundwater table and will expand the active floodplain of the existing drainage course to connect surface flows to the areas.

6.4 Target Acreages

A total of 6 acres of wetland/riparian habitat will be restored on-site in the biological open space located at the southern portion of the project site. A total of 12 acres of

wetland/riparian restoration/enhancement will occur at scattered locations within the biological open space on-site.

6.5 Monitoring Methods

The revegetation areas will be monitored to assess the progress of the mitigation effort and to determine if success criteria/performance standards are being achieved. Qualitative and quantitative monitoring methods will be used.

6.5.1 Qualitative Monitoring

Evaluation of plant health and identifying and correcting any problems are necessary to ensure successful native vegetation establishment. Qualitative monitoring methods will include review of the mitigation areas by the revegetation monitor to examine plant vigor and exotic plant encroachment. Qualitative monitoring will also include observations of erosion, sedimentation, and areas at risk of being eroded. The revegetation monitor will document the findings and make recommendations to the maintenance contractor for remedial actions, if necessary.

Qualitative monitoring will also include the preparation of a list of wildlife species observed on the mitigation sites and a description of wildlife use will be included with each annual report.

6.5.2 Quantitative Monitoring

Quantitative monitoring will be used to sample variables that measure wetland habitat values (including percent native plant cover, diversity, density, survivorship) as well as wetland habitat functions (seedling recruitment and wildlife activity). Quantitative monitoring will measure the development of vegetation in the project area and document achievement of success criteria as defined by the performance standards. Different monitoring techniques (using transects or quadrats) may be employed for each revegetation type as needed to best assess the progress of each vegetation type within the project.

For the wetland revegetation areas, permanent vegetation sampling stations will be established to measure year-to-year changes in native plant cover, non-native plant cover, recruitment of native plant species, and native plant survivorship, density and diversity. Each sampling station will be used as a photo documentation point to record the progress of mitigation over the monitoring period. Results will objectively determine if the project meets the success criteria/performance standards in relation to the same data collected at the reference site.

6.6 Monitoring Schedule

The revegetation sites will be monitored according to the schedule presented in Table 8. Qualitative site assessments will be conducted at a greater frequency the first two years after native plant installation as any site modifications or adjustments to native plants and supplemental irrigation made early will increase the probability of meeting the five year success criteria/performance standards. Qualitative monitoring will be begin starting in Year 2, allowing the native plants to become established and time for sufficient growth to meet the early success criteria/performance standards.

TABLE 8
FIVE-YEAR MONITORING SCHEDULE

Task	Year 1	Year 2	Year 3	Year 4	Year 5
Qualitative monitoring	Minimum One Visit Every Month	Minimum One Visit Every Month	Minimum One Visit Every Three Months	Minimum One Visit Every Three Months	Minimum One Visit Every Three Months
Quantitative monitoring	None	Spring	Spring	Spring	Spring

6.7 Monitoring Reports

Monitoring reports will be prepared and submitted to the County of San Diego on an annual basis with the Year 1 report being a Year-End Report. The annual reports will include the results of the qualitative data (wildlife observations, qualitative evaluation of invasive species, maintenance activities, interim remedial measures) and quantitative data (sampling methods, data summary analysis, success criteria/performance standards comparison and discussion, remedial action discussion, recommendations, and photo documentation) collected during the year for the revegetation sites. Monitoring and maintenance field data shall be included in an appendix to the report. The annual monitoring reports for Years 3–5 will compare findings of the current year with those in previous years. Annual monitoring reports shall be completed at the end of the monitoring year and submitted to the County of San Diego no later than the first week of January.

Any significant issue or contingency that arises on the job site (e.g., plant survival issues, fire, or flooding) shall be reported in writing to the County of San Diego within two weeks from the date of the incident. Accompanying the report shall be a plan for remediation, with an implementation schedule and a monitoring schedule.

CHAPTER 7.0 COMPLETION OF COMPENSATORY MITIGATION

A written notification of completion will be provided to the County of San Diego once the mitigation areas have achieved the five-year success criteria/performance standards and resource agency confirmation of completion of project compensatory mitigation requirements has been issued.

CHAPTER 8.0 CONTINGENCY MEASURES

8.1 Initiating Contingency Procedures

If the success criteria/performance standards are not achieved at the end of each year or by the end of the fifth year of the monitoring program, the owner/project proponent and revegetation monitor will consult with the County of San Diego and pertinent resource agencies to develop appropriate contingency procedures. Contingency procedures may involve remedial measures such as replanting areas, continued weed control, or finding alternative revegetation sites. The project proponent understands that failure of any significant portion of the wetland revegetation areas may result in a requirement to replace or revegetate that portion of the site.

8.2 Alternative Locations for Contingency Compensatory Mitigation

If it is decided that an alternative location is required to complete compensatory mitigation requirements, then the project proponent/owner shall coordinate with the County of San Diego and pertinent resource agencies to locate an approved site. Alternative locations for mitigation sites may be found on-site in other portions of the biological open space preserve, off-site at a suitable location, or as credits purchased from an approved off-site wetland mitigation bank.

8.3 Funding

The project proponent/owner will be responsible for providing all necessary funds to cover costs associated with any required contingency compensatory mitigation. Sufficient funds will be provided to cover the implementation of the contingency mitigation plan, associated maintenance and monitoring program, and report preparation. A contingency revegetation agreement shall be signed and notarized by the property owner following approval of remedial measures and accompanied by the required security as agreed upon by the County of San Diego.

CHAPTER 9.0 REFERENCES CITED

California Invasive Plant Council (Cal-IPC)

2012 California Invasive Plant Inventory Database. 2012. Accessed July 19, 2012 at http://www.cal-ipc.org/ip/inventory/weedlist.php.

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2012 Jurisdictional/Wetland Delineation 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. Prepared for the County of San Diego.

2013 Biological Resource Report for Lilac Hills Ranch Specific Plan, General Plan Amendment, Rezone, EIR, Tentative Map (Master), Tentative Map (Phase 1 Implementing TM), Major Use Permit. Prepared for the County of San Diego.

ATTACHMENT 17

Conceptual Resource Management Plan for On-site Biological Open Space

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CONCEPTUAL BIOLOGICAL RESOURCES MANAGEMENT PLAN FOR ON-SITE BIOLOGICAL OPEN SPACE 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

PROJECT APPLICANT:
ACCRETIVE INVESTMENTS, INC.
12275 EL CAMINO REAL, SUITE 110
SAN DIEGO, CA 92130
ATTN: JON RILLING
PH: 858-546-0700

PREPARED FOR:
COUNTY OF SAN DIEGO
5510 OVERLAND AVENUE, THIRD FLOOR
SAN DIEGO, CALIFORNIA 92123
KIVA PROJECT: 09-0112513
SP 3810-12-001
GPA 3800-12-001
REZ 3600-12-003
TM 5571 ~~RPL3~~ RPL4 and 5572 ~~RPL3~~RPL4
MUP 3300-12-005

PREPARER:

GERRY SCHEID
COUNTY-APPROVED BIOLOGIST

RECON ENVIRONMENTAL INC.
1927 FIFTH AVENUE
SAN DIEGO, CA 92101
619-308-9333

May 14, 2014
~~May 23, 2013~~

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Terms and Acronyms

CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
County	County of San Diego
CRMP	Conceptual Biological Resources Management Plan
DPLU	Department of Planning and Land Use
DPR	Department of Park and Recreation
DPW	Department of Public Works
HOA	Homeowners Association
I-15	Interstate 15
MOU	Memorandum of Understanding
MSCP	Multiple Species Conservation Program
MSL	Mean Sea Level
NCCP	Natural Community Conservation Plan
PAMA	Pre-Approved Mitigation Area
RMP	Biological Resource Management Plan
RPO	Resource Protection Ordinance
SANDAG	San Diego Association of Governments
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

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1.0 Introduction

This Conceptual Resource Management Plan (CRMP) has been prepared for the proposed Lilac Hills Ranch project in accordance with the mitigation requirements identified in the Lilac Hills Ranch Biological Resources Report (RECON 2014~~2~~). This document is consistent with the format and content requirements of the "County of San Diego Report Format and Content Requirements – Conceptual Biological Resources Management Plan" (2010). This CRMP covers the management of the habitats to remain as part of the on-site biological open space on the project site.

1.1 Purpose of Conceptual Resource Management Plan

The purpose of this CRMP is to provide direction for the permanent preservation and management of the on-site biological open space to be included in a conservation easement. This biological open space totals ~~105~~ 104.1 acres and consists of Resource Protection Ordinance (RPO) wetlands and upland habitats that are included as part of the wetland buffer.

More specifically, the plan will accomplish the following:

1. The plan will guide management of vegetation communities/habitats, plant and animal species, cultural resources, and programs described herein to protect and, where appropriate, enhance biological and cultural values.

2. The plan will guide appropriate public uses of the property (if public uses are included).

3. The plan will provide an overview of the operation, maintenance, administrative and personnel requirements to implement management goals, and serves as a budget planning aid.

Preservation of the approximately ~~105~~ 104 acres of biological open space on-site will be sufficient to provide in-kind mitigation opportunities for potentially significant impacts to RPO wetlands. The biological open space preserve will be conveyed with an easement to the County of San Diego. The underlying fee title will be conveyed to a non-profit entity which is acceptable to the County Department of Planning and Land Use (DPLU).

1.1.1 Conditions and/or Mitigation Measures that Require CRMP

A CRMP is required for projects in the County of San Diego when a planned project proposes open space preservation that would significantly benefit from active management and/or monitoring of biological and/or cultural resources. A CRMP is always required when a project proposes open space totaling more than 50 acres or more, regardless of the presence or absence of sensitive species. In the case of the Lilac Hills Ranch open space preserve, both of these parameters apply.

The details of this CRMP may be modified when the Final Resource Management Plan (RMP) is prepared and submitted to the County for approval. The County will review the Final RMP to ensure that it meets the specified Purpose and Objectives.

1.1.2 Agency Review and Coordination

This document was written in collaboration with the County of San Diego and Accretive Investments, Inc. The management of the Lilac Hills Ranch open space, as detailed in this CRMP, does not interfere with mitigation and monitoring requirements mandated by the California Department of Fish and Game, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, or by any other permitting agency.

1.2 Implementation

1.2.1 Responsible Parties and Designation of Resource Manager

The property is owned by the following entity:

Accretive Investments, Inc.
12275 El Camino Real, Suite 110
San Diego, CA 92130

This CRMP will be implemented and managed by one of the following resource managers:

- Conservancy group
- Natural resources land manager
- Natural resources consultant
- County Department of Parks and Recreation (DPR)

- County Department of Public Works (DPW)
- Federal or State Wildlife Agency (U.S. Fish and Wildlife Service, California Department of Fish and Game)
- Federal Land Managers, including but not limited to Department of Parks and Recreation, Watershed Management or Department of Public Works.
- City Land Managers, including but not limited to Departments of Public Utilities, DPR, and Environmental Services.

If the developer desires the County DPR to manage the land, the following criteria must be met:

1. The land must be located inside a Pre-Approved Mitigation Area (PAMA) or proposed PAMA, or otherwise deemed acceptable by DPR.
2. The land must allow for public access.
3. The land must allow for passive recreational opportunities such as a trails system.

The resource manager shall be approved in writing by the Director of Planning and Land Use, the Director of Public Works, or the Director of Parks and Recreation. Any change in the designated resource manager shall also be approved in writing by the director of the County department that originally approved the resource manager. Appropriate qualifications for resource managers include, but are not limited to:

- Ability to carry out habitat monitoring or mitigation activities.
- Fiscal stability including preparation of an operational budget (using an appropriate analysis technique) for the management of this CRMP.
- Have at least one staff member with a biological, ecological, or wildlife management degree from an accredited college or university, or have a Memorandum of Understanding (MOU) with a qualified person with such a degree.
- If cultural sites are present, have a cultural resource professional on staff or an MOU with a cultural consultant.
- Experience with habitat and cultural resource management in southern California.

Restoration Entity

If revegetation/restoration activities are required, management responsibility for the revegetation/restoration area shall remain with the restoration entity until revegetation/restoration has been completed. Upon County/Agency acceptance of the

revegetated/restored area, management responsibility for the revegetation/restoration area will be transferred to the resource manager.

1.2.2 Financial Mechanism

Acceptable financial mechanisms include the following:

- Special District. Formation of a Lighting and Landscape District or Zone, or Community Facility District as determined appropriate by the Director of DPLU, DPW, or DPR.
- Endowment. A one-time non-wasting endowment, which is tied to the property, to be used by the resource manager to implement the RMP.
- Other acceptable types of mechanisms including annual fees, to be approved by the Director of DPLU, DPW, or DPR.
- Transfer of ownership to existing entity (e.g., Borrego Foundation, Cleveland National Forest, City of San Diego) for management.

1.2.3 Conceptual Cost Estimate

See Table 1.

TABLE 1
BIOLOGICAL RESOURCES MANAGEMENT TASKS

Check if applies	Tasks	Frequency (times per year)	Hours Required per Year
Biological Tasks			
X	Baseline inventory of resources (if original inventory is over 5 years old)	One time	40 hrs.
X	Update biological mapping	Once every 5 years	24 hrs.
	Update aerial photography	Once every xx years	
X	Removal of invasive species	Monthly/First Year Quarterly/Next 10 years Annually/After 10 years	First year: 300 hrs.; Next 10 years: 300 hrs.; After 10 years: 150 hrs.
	Predator control	Monthly/Quarterly/ Annually	
X	Habitat Restoration/Installation	Installation	200 hrs.
X	Habitat Restoration/Monitoring and Management	Monthly/Quarterly	40 hrs. / 160 hrs.
	Poaching control	Monthly/Quarterly	
	Species Surveys	Once every xx years	
	Species management	*(add frequency)*	
	Noise management, if required	*(add frequency)*	
X	Biological Resource Monitoring	*Quarterly*	160 hrs.
Operations, Maintenance, and Administration Tasks			
X	Establish and maintain database and analysis of data	Annually	20 hrs.
X	Write and submit annual report to County	Annually	40 hrs.
X	Submit review fees for County review of annual report	Annually	
X	Review and if necessary, update management plan	Every 5 years	40 hrs.
X	Construct permanent signs	One time	200 hrs.
X	Replace signs	10 signs per year	40 hrs.
X	Construct permanent fencing/gates	One time	200 hrs.
X	Maintain permanent fencing/gates	Three times per year	60 hrs.
X	Remove trash and debris	Twice per year	40 hrs.
	Coordinate with DEH and Sheriff	*(add frequency)*	
	Maintain access road	*(add frequency)*	
	Install storm water BMPs		
	Maintain storm water BMPs	*(add frequency)*	
	Restore built structure	One time	
	Maintain built structure	*(add frequency)*	
	Maintain regular office hours	*(add frequency)*	
	Inspect and service heavy equipment and vehicles	*(add frequency)*	
	Inspect and repair buildings, residences, and structures	*(add frequency)*	
	Inspect and maintain fuel tanks	*(add frequency)*	
	Coordinate with utility providers and easement holders	*(add frequency)*	

TABLE 1
BIOLOGICAL RESOURCES MANAGEMENT TASKS

Check if applies	Tasks	Frequency (times per year)	Hours Required per Year
	Manage hydrology (as required)	*(add frequency)*	
	Coordinate with law enforcement and emergency services (e.g., fire)	*(add frequency)*	
	Coordinate with adjacent land managers	*(add frequency)*	
	Remove graffiti and repair vandalism	*(add frequency)*	
Public Use Tasks			
X	Construct trail(s)	One time	200 hrs.
X	Monitor, maintain/repair trails (unless a trails easement has been granted to the County)	Annually	200 hrs.
X	Control public access	Monthly	200 hrs.
	Provide Ranger patrol	*(add frequency)*	
	Provide visitor/interpretive services	*(add frequency)*	
	Manage fishing and/or hunting program (if one is allowed)	*(add frequency)*	
	Provide Neighbor Education – Community Partnership	*(add frequency)*	
X	Prepare and reproduce trail maps and interpretive materials	Twice per year	40 hrs.
	If HOA is funding management, provide annual presentation to HOA	Annually	
	Coordinate volunteer services	*(add frequency)*	
	Provide emergency services access/response planning	*(add frequency)*	
Fire Management Tasks			
X	Coordinate with applicable fire agencies and access (gate keys, etc.) for these agencies	Annually	20 hrs.
	Plan fire evacuation for public use areas	One time	
	Protect areas with high biological importance	*(add frequency)*	
	Hand-clear vegetation	*(add frequency)*	
	Mow vegetation	*(add frequency)*	
Post-Fire Tasks			
X	Control post-fire erosion	After each fire event	100 hrs.
X	Remove post-fire sediment	After each fire event	100 hrs.
X	Reseed after fire	After each fire event	80 hrs.
X	Replant after fire	After each fire event	200 hrs.

1.2.4 Reporting Requirements

An RMP Annual Report will be submitted to the County (and resource agencies, as applicable), along with the submittal fee to cover County staff review time. The Annual Report shall discuss the previous year's management and monitoring activities, as well as management/monitoring activities anticipated in the upcoming year.

The Annual Report shall provide a concise but complete summary of all management and monitoring methods, identify any new management issues, and address the success or failure of management approaches (based on monitoring). The report will include a summary of changes from baseline or previous year conditions for species and habitats, and address any monitoring and management limitations, including weather (e.g., drought). The report shall also address any adaptive management (changes) resulting from previous monitoring results and provide a methodology for measuring the success of adaptive management.

For new sensitive species observations or significant changes to previously reported species, the Annual Report shall include copies of completed California Natural Diversity Database (CNDDB) forms with evidence that they have been submitted to the State. The report shall also include copies of invasive plant species forms submitted to the State or County.

A fee for staff's review time will be collected by DPLU upon submittal of the Annual Report. The RMP may also be subject to an ongoing deposit account for staff to address management challenges as they arise. Deposit accounts, if applicable, must be replenished to a defined level as necessary.

1.2.5 RMP Agreement

The County will require an Agreement with the applicant when an RMP is required. The Agreement will be executed when the County accepts the Final RMP. The Agreement will obligate the applicant to implement the RMP and provide a source of funding to pay the cost to implement the RMP in perpetuity. The Agreement shall also provide a mechanism for the funds to be transferred to the County if the Resource Manager fails to meet the goals of the RMP.

The Agreement will specify that RMP funding or funding mechanism be established prior to the following milestones:

- For subdivisions, prior to the approval of grading or improvement plans, or prior to approval of the Parcel/Final Map, whichever is first;
- For permits, prior to construction or use of the property in reliance of the permit.

1.2.6 Limitations and Constraints

Specific internal or external management constraints that may affect meeting RMP goals have not been identified for this CRMP. Examples of potential constraints that may be applicable include, but are not limited to, the following:

- Environmental factors such as the influence of local water availability (either surface or subsurface waters), introduction or spread of non-native species, presence of threatened or endangered species, fire, flood, drought, erosion, air pollution, and hazardous waste materials.

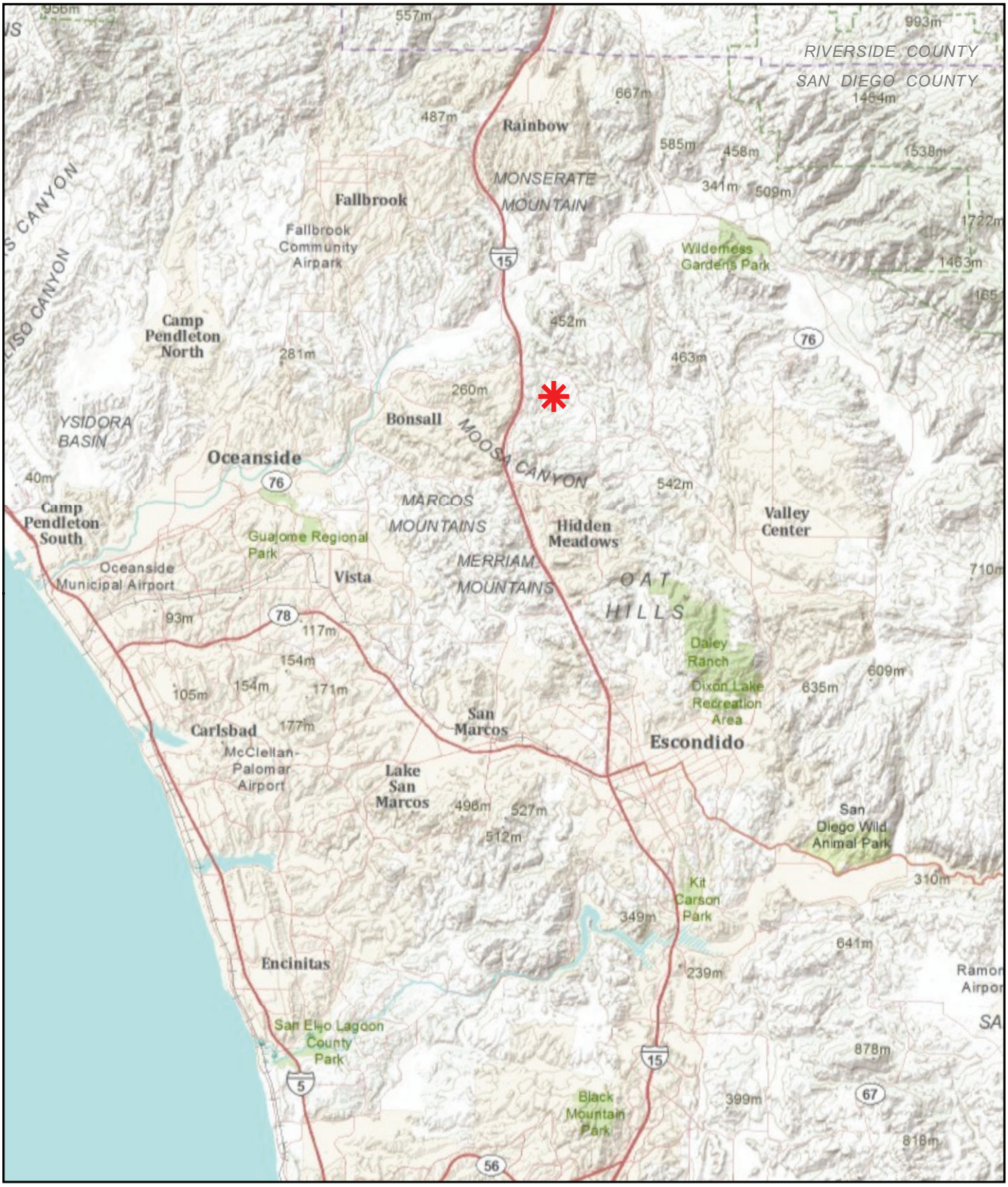
- Legal, political, or social factors which influence or mandate certain types of management; special permitting requirements (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, archeological sites, etc.), County Ordinances (e.g., nuisance abatement), MOUs, or other special agreements with private or public entities, water, timber, or mineral rights for the area.

- Financial factors such as the source of funding to be used for operation and maintenance, personnel requirements, and overall management of the area (fund source may dictate management direction).

2.0 Property Description

2.1 Legal Description

The proposed Lilac Hills Ranch project site 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 I-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 Plan 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 half-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-minute Pala and Bonsall quadrangles (Figure 2).



Project Location

FIGURE 1

Regional Location

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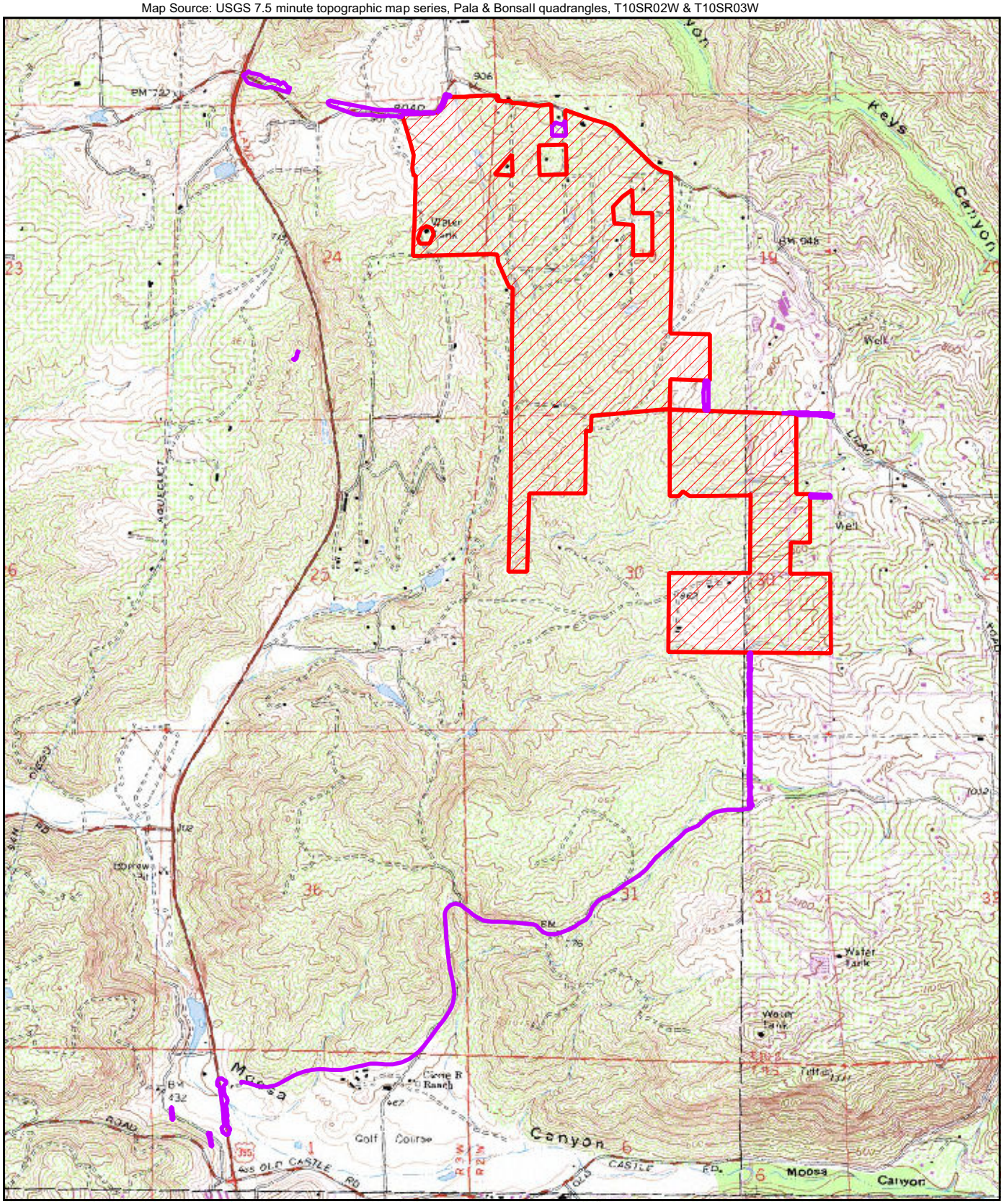
Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



Project Boundary

Off-site Improvement Areas

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FIGURE 2

Project Location on USGS Map

2.2 Environmental Setting

The following information is summarized from the Biological Resource Report for the Lilac Hills Ranch project (RECON 2014~~2~~). 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 mean sea level (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; San Diego Association of Governments [SANDAG] 1995). Sandy loam and coarse sandy loam soils in the following soil series are present: Bonsall, Cieneba, Fallbrook, Greenfield, Placentia, Ramona, Visalia, and Vista (Figure 3). 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 Lilac Hills Ranch project area is located within the proposed North County Multiple Species Conservation Program (MSCP) area (Figure 4). It is outside of and south of the proposed 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.

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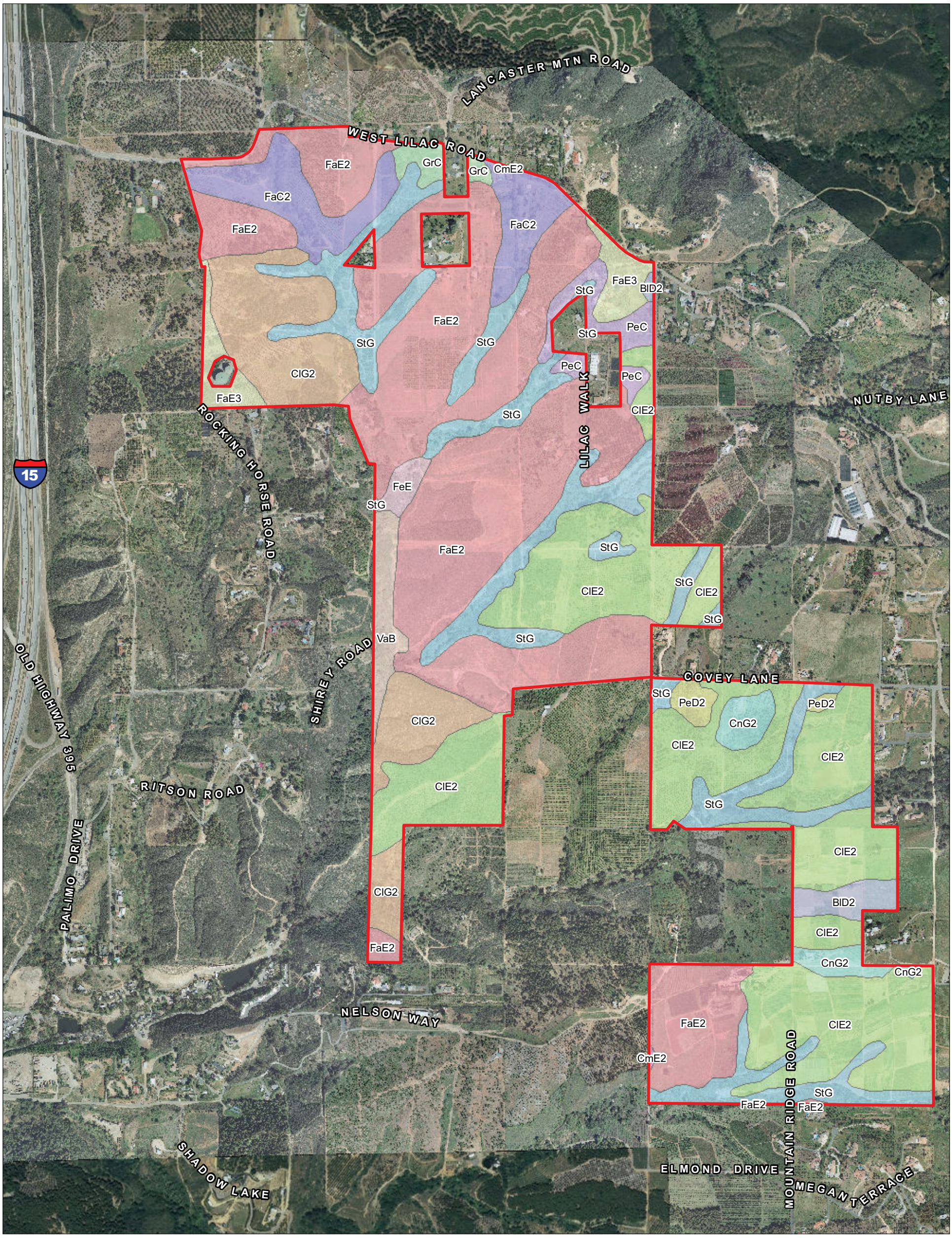
Image source: Custom image provided by client (flown March 2012), and Aerials Express, All Rights Reserved (flown March 2010)



Project Boundary

Soil Classification

- BlD2 - Bonsall sandy loam, 9 to 15 % slopes, eroded
- ClE2 - Cieneba coarse sandy loam, 15 to 30 % slopes, ero ded
- ClG2 - 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 3

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Soils

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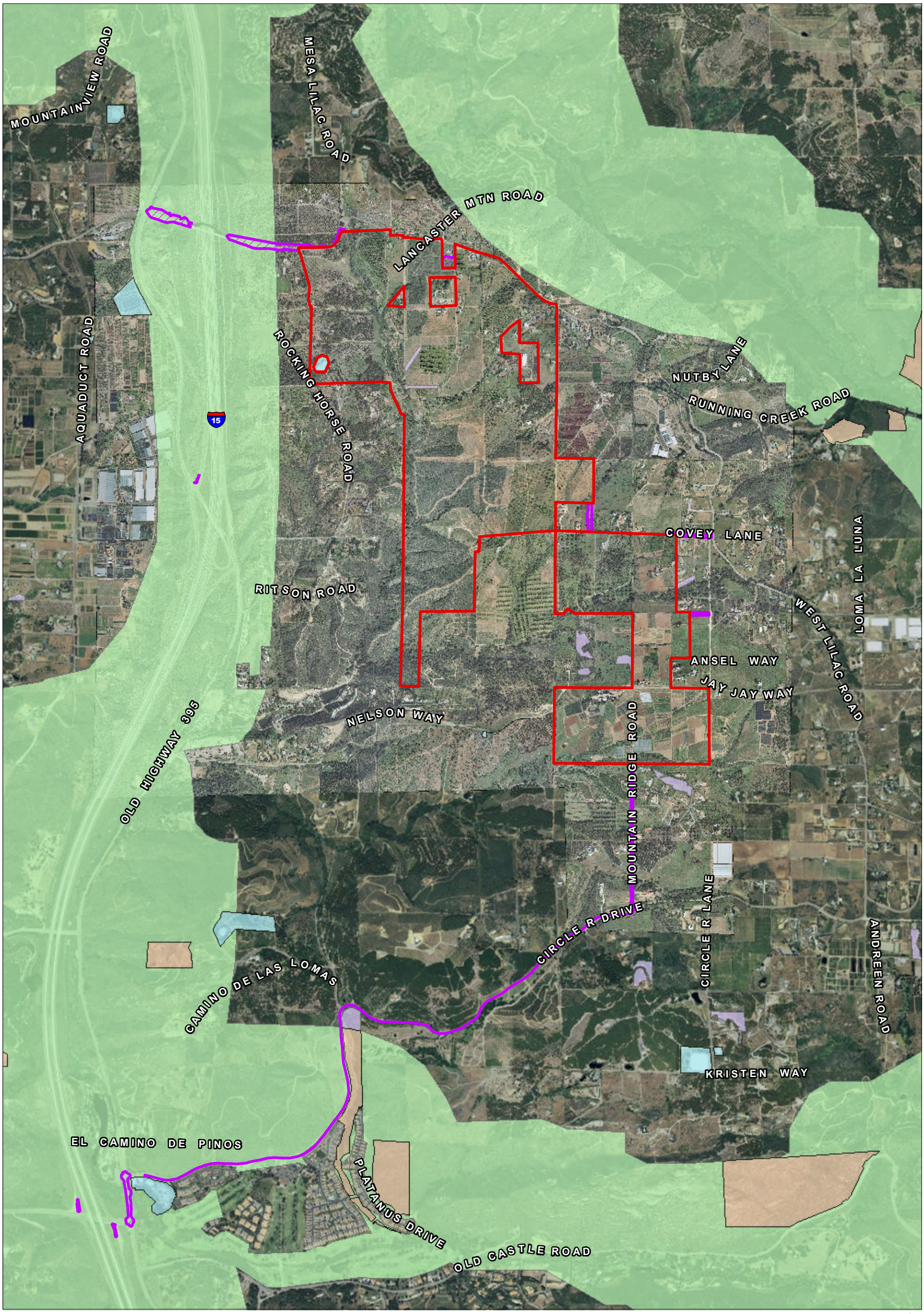

0 Feet 1,600

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 4

Project Area in Relation to Draft North County MSCP
(MSCP Currently Not Approved)

RECON

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2.3 Land Use

Existing on-site land uses include agricultural activities, consisting mostly of citrus and avocado groves and taking up most of the central and southern portions, or about 54 percent of the site. There are several homes, sheds, and agricultural buildings scattered throughout the site, none of which is historic. 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.

Land uses on adjacent properties are similar to that of the project site. Agricultural uses dominate the landscape with small remnant patches of native habitat occurring primarily along drainage courses and steep slopes.

No existing hiking trails occur on the project site. Public access is restricted as the land is privately owned. The project area includes two locations that are covered by relatively small open space easements that occur outside of a PAMA.

3.0 Biological Resources Description

This section is based on the biological data collected by RECON Environmental, Inc., during general and focused surveys conducted from 2011 through 2012 which is summarized below from the biological resource report prepared for the Lilac Hills Ranch project (RECON 2014~~2~~).

3.1 Vegetation Communities/Habitats

The proposed on-site biological open space within the Lilac Hills Ranch project site will be comprised of 14 main habitat types (Table 2; Figures 5a and 5b). A description of each habitat type and its functions and values is given below.

TABLE 2
HABITATS AND VEGETATION COMMUNITIES WITHIN BIOLOGICAL OPEN SPACE

Habitat/Vegetation Community	Preserved On-site (acres)
Coast live oak woodland	3.3
Coastal sage scrub	2.6
Disturbed coastal sage scrub	0.3
Disturbed coastal/valley freshwater marsh	0.5
Eucalyptus woodland	0.7
Southern coast live oak riparian woodland	21.4
Disturbed southern coast live oak woodland	1.4
Southern mixed chaparral	26.0
Disturbed southern mixed chaparral	1.1
Southern willow riparian woodland	4.2
Southern willow scrub	5.8
Disturbed wetland	0.3
Extensive agriculture – row crops	6.0~~5.5~~
Intensive agriculture – nursery	3.0~~2.5~~
Vineyard	0.1
Orchard	15.5~~15.1~~
Disturbed habitat	9.2
Developed	2.9
TOTAL	104.1~~102.7~~

3.1.1 Coastal Sage Scrub (32520)

Coastal sage scrub vegetation occurs in two areas within the on-site biological open space. The largest patch of coastal sage scrub occurs in the west central part of the open space area. The second area of coastal sage scrub occurs on the east central portion of the open space adjacent to riparian habitat. Dominant plant species in all coastal sage scrub patches are California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), California buckwheat (*Eriogonum fasciculatum*), and laurel sumac (*Malosma laurina*).

Habitat function and value is moderate for the patches of coastal sage scrub being preserved because of relatively small acreage. The coastal sage scrub habitat will provide native vegetation within the wetland buffer helping to reduce edge effects on the riparian habitats also being preserved in open space.

3.1.2 Southern Mixed Chaparral (37120)

Southern mixed chaparral vegetation being preserved in open space occurs along the mid-central to southern portion of the western open space areas, and along the edges of drainage courses within the central open space areas. Dominant plant species include chamise (*Adenostoma fasciculatum*), mission manzanita (*Xylococcus bicolor*), hoary-

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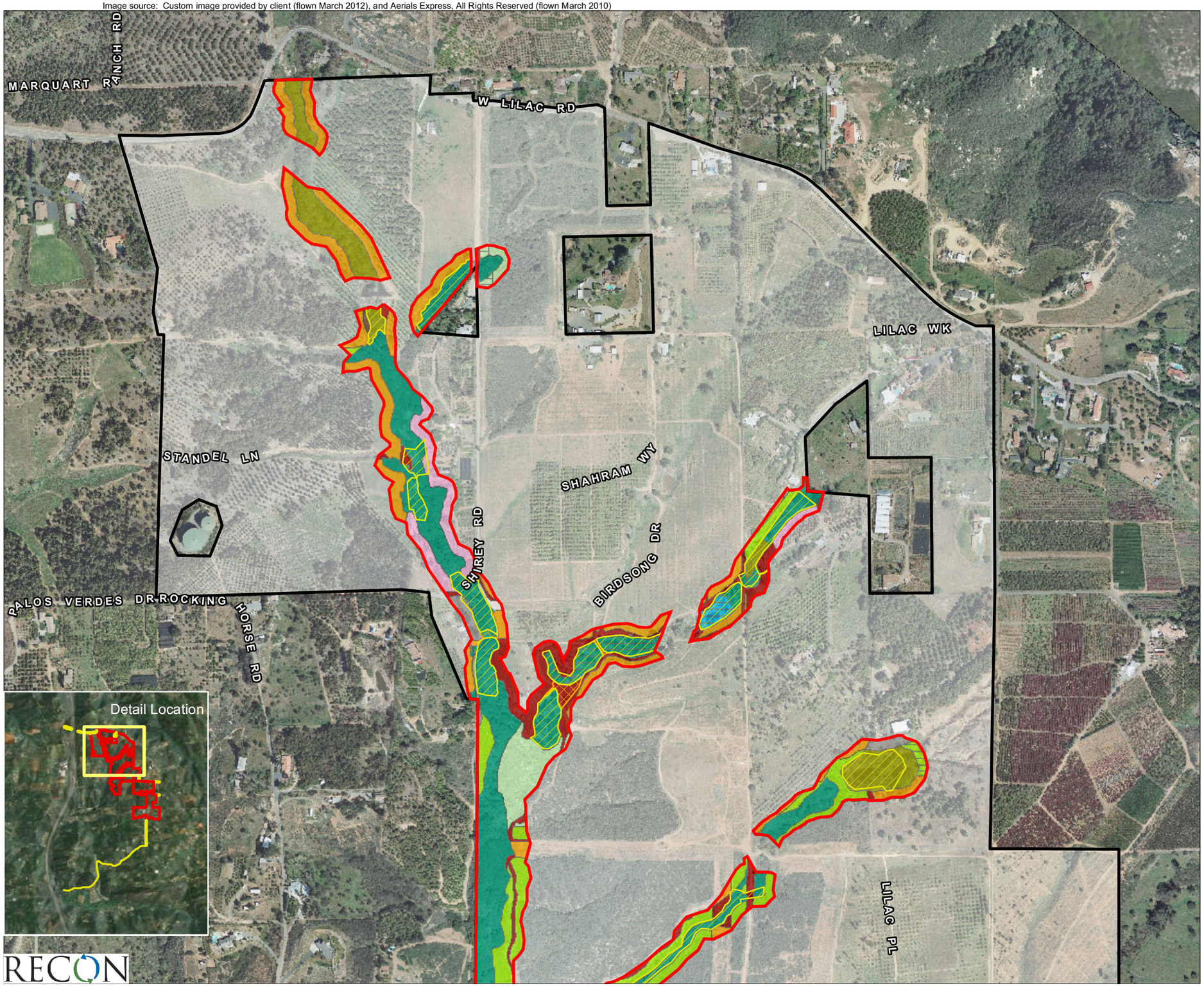

- Project Boundary
- Biological Open Space Boundary
- Wetland Creation
- Wetland Enhancement

Vegetation Communities and Landcover Type

- Coastal Sage Scrub (32520)
- Disturbed Coastal Sage Scrub (32520)
- Disturbed Coastal/Valley Freshwater Marsh (52410)
- Eucalyptus Woodland (79100)
- 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 Riparian Woodland (62500)
- Intensive Agriculture - Nursery
- Orchard (18100)
- Vinyard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

0 Feet 500

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FIGURE 5a

Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation

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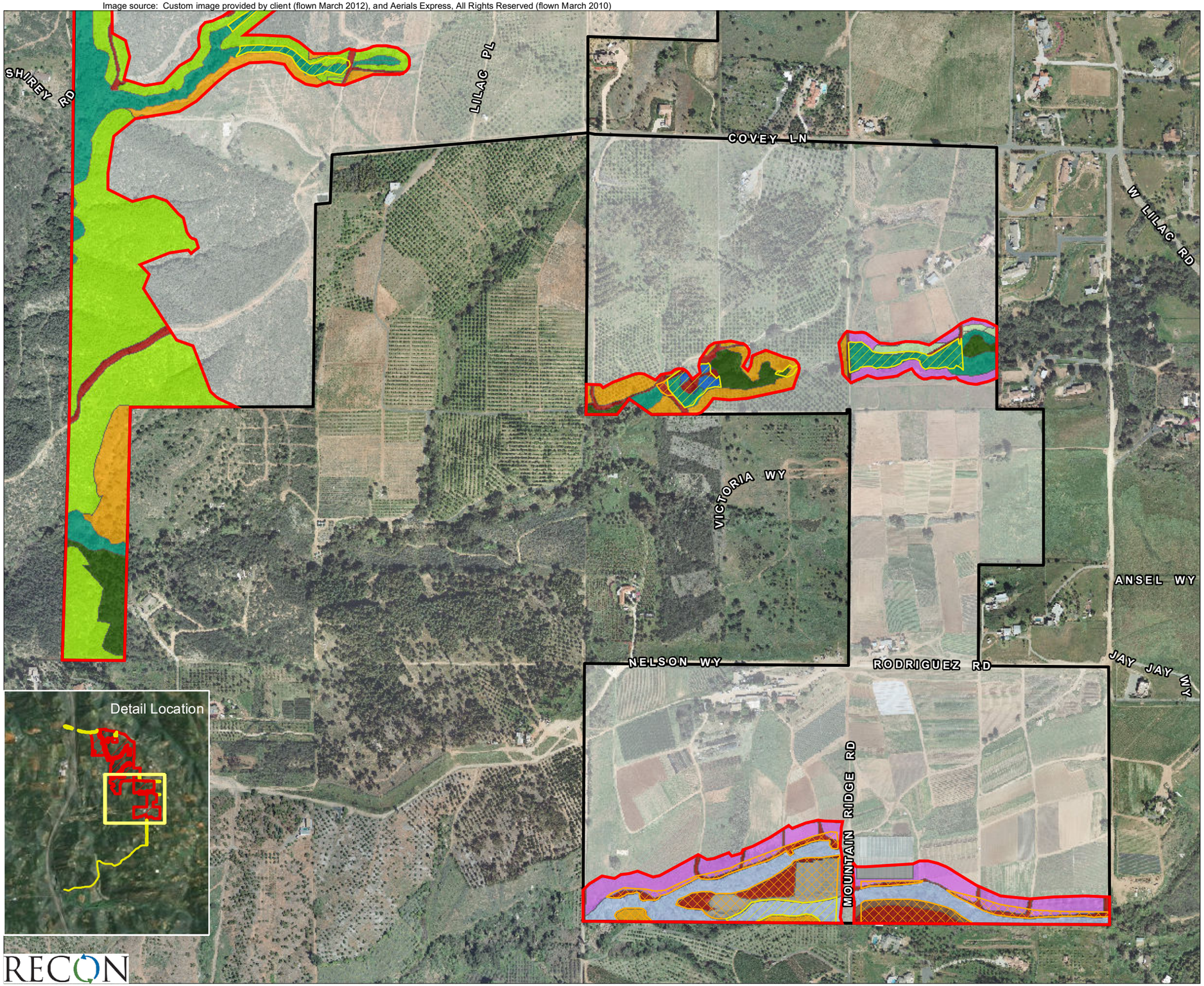

- Project Boundary
- Biological Open Space Boundary
- Wetland Creation
- Wetland Enhancement

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)
- 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)
- Extensive Agriculture - Row Crops (18320)
- Orchard (18100)
- Disturbed Habitat (11300)
- Developed (12000)

0 Feet 500

RECON

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FIGURE 5b

Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation

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leafed ceanothus (*Ceanothus crassifolius*), black sage, California buckwheat, and laurel sumac.

The habitat quality of the southern mixed chaparral being preserved in open space is moderate to high, as the vegetation remaining on the western part of the open space area is in a relatively large contiguous patch that connects to native chaparral areas off-site to the southwest. Southern mixed chaparral occurs as narrower patches of habitat on in the central portion of the open space area. The dense cover of native shrubs contains a diverse assemblage of chaparral species that provide vegetation within the wetland buffers to help reduce edge effects.

3.1.3 Coast Live Oak Woodland (71160)

Coast live oak woodland being preserved occurs in relatively small patches in the eastern central and extreme southwestern portions of the open space areas. The largest area of preserved coast live oak woodland will occur 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 adjacent to riparian habitats being preserved in the eastern central portion of the open space. The dominant plant species is the coast live oak tree (*Quercus agrifolia*). Vegetation growing beneath the oak tree canopy varies from non-native grasses to open areas of native shrubs such as poison oak (*Toxicodendron diversilobum*) and mule fat (*Baccharis salicifolia*).

The habitat quality of the coast live oak woodland that occurs in the 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 extreme southwestern part of the open space and where it is adjacent to riparian habitat in the east central part of the open space have relatively high habitat values due to the location of the habitat adjacent to native riparian areas and an understory composed of native plant species.

3.1.4 Eucalyptus Woodland (79100)

A small, narrow stand of eucalyptus trees (*Eucalyptus* spp.) occurs in the northwest portion of the on-site open space area. 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.

3.1.5 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 in the north central portion of the open space area. The

freshwater marsh is described as disturbed due to the heavy infestation of pampas grass (*Cortedaria* sp.). Cattail (*Typha latifolia*) and umbrella sedge (*Cyperus esculentus*) persist among the pampas grass.

The habitat value for the freshwater marsh area is currently low due to the predominance of pampas grass, but will be improved with eradication of the non-native plant species as part of the proposed restoration/enhancement of this area implemented for the on-site wetland mitigation. The restored freshwater marsh habitat value would be moderate, as the marsh will add diversity to the adjacent riparian woodland areas.

3.1.6 Southern Coast Live Oak Riparian Woodland (61310)

Southern coast live oak riparian woodland on-site is the second most predominant vegetation community being preserved in open space along the larger intermittent drainages and the main tributaries. This riparian woodland vegetation community occurs along most of the western border of the main open space area and along tributary east-west drainages in the central portions of the open space. The dominant plant species of 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 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 over much 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.

3.1.7 Southern Willow Scrub (63320)

Southern willow scrub vegetation occurs in the extreme southern portion of the open space areas on-site. It is associated with portions of the larger, intermittent drainage courses in these areas. 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 being preserved are moderate due to the current edge effects associated with the adjacent agricultural activities and the relatively narrow width of the willow scrub habitat. The width of the riparian habitat would be increased with the implementation of wetland habitat creation as part of the on-site revegetation mitigation program. The wetland buffers and limited building zones provided by the project will help reduce any potential edge effects to the willow habitat

being preserved open space areas. The southern willow scrub habitat supports a diverse assemblage of bird species, insects, reptiles, and mammals.

3.1.8 Mule Fat Scrub (63310)

Mule fat scrub vegetation on-site occurs as a small patch in an intermittent drainage course in the northeastern part of the open space areas. 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 current habitat value for the mule fat scrub is low due to edge effects associated with the agricultural activities and the relatively narrow width of the mule fat scrub habitat. Nonetheless, the mule fat scrub supports a limited assemblage of bird species, insects, reptiles, and perhaps small mammals. Habitat function and value of the mule fat scrub are anticipated to increase after implementation of the restoration/enhancement activities in this habitat as part of the on-site wetland revegetation plan.

3.1.9 Southern Willow Riparian Woodland (62500)

Southern willow riparian woodland vegetation occurs in the extreme northwestern portion of the open space areas. It is associated with portions of the larger, intermittent drainage course in this area. Dominant plant species in this vegetation community include red willow, black willow, arroyo willow, narrow-leaved willow, and mule fat.

Overall the current habitat values for the southern willow riparian woodland are moderate due to edge effects associated with the agricultural activities and the narrow width of the willow woodland habitat. The wetland buffer and limited building zones being provided by the project will help reduce these edge effects and improve habitat function and value. This habitat supports a diverse assemblage of bird, insects, reptiles, and mammals common to riparian areas.

3.1.10 Disturbed Wetland (11200)

A relatively small area of disturbed wetland is being preserved along a drainage course in the east central part of the open space areas. The herbaceous wetland vegetation that grows here is characterized as disturbed due to the current periodic mowing as part of the vegetation maintenance activities associated with the adjacent orchard. Dominant plant species at this location include curly dock (*Rumex crispus*), bristly ox tongue (*Picris echioides*), and water cress (*Nasturtium officinale*).

The current 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 vales. The wetland buffer and limited building zones provided by the project will help reduce the potential edge effects in this open space area. The disturbed wetland area function and value will be increased with the implementation of the restoration/enhancement of this habitat as part of the on-site wetland revegetation plan.

3.1.11 Disturbed Habitat (11300)

Disturbed habitat was used to characterize areas where more or less permanent disturbances have inhibited the growth of native vegetation. In the on-site open space areas, the designation was used to distinguish the remaining roads that bisect the open space, as well as areas disturbed as part of the agricultural operations (i.e., wells, mulch areas). These areas are mostly devoid of vegetation, but some of the disturbed areas may occasionally support a growth of non-native annual species such as slender wild oat (*Avena barbata*), black mustard (*Brassica nigra*), star-thistle (*Centaurea melitensis*), and pigweed (*Chenopodium album*).

Habitat values for disturbed areas are considered low due to the lack of native vegetation. These areas form part of the wetland buffer provided to help reduce the potential for edge effects on the riparian habitat being preserved in open space.

3.1.12 Agricultural Areas

Agricultural lands are being preserved in the southeastern, east central, and northern portions of the open space areas. Agricultural types being preserved 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. Areas used to produce stock for the commercial nursery business are located in the central part of the open space.

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.

3.1.13 Developed (12000)

Areas mapped as developed occur in the open space areas as relatively small areas used for agricultural activities (i.e., green houses, equipment storage, etc.). These areas have low habitat values due to the lack of native vegetation. The developed areas in the

extreme southern portion of the open space areas will be used for the creation of wetland habitat as part of the wetland revegetation plan, thereby increasing the habitat function and value of these areas.

3.2 Plant Species

The habitats being preserved in the open space areas contain 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.

The most common native plant species found on the open space areas 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.

Three sensitive plant species were observed in the project area. Prostrate spineflower (*Chorizanthe procumbens*) is not a state or federally listed species and is no longer a ranked species by the California Native Plant Society (CNPS), but is currently on List D of the County sensitive species list. Prostrate spineflower was observed in openings within and along fuel breaks adjacent to southern mixed chaparral habitat and portions of this population will be preserved with the southern mixed chaparral in the open space areas.

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. Approximately 20 individuals of southwestern spiny rush were observed and will be preserved in a drainage course in the northwestern portion of the open space area. 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. Three Engelmann oak trees were observed on the site associated with coast live oak riparian woodlands and these three oak trees are being preserved in the open space area.

3.3 Wildlife Species

Invertebrates, particularly butterflies, common reptiles and amphibians, common resident birds, and mammals constitute the majority of the wildlife community within the open space. The southern coast live oak riparian woodland, southern willow scrub, coastal sage scrub, and southern mixed chaparral being preserved in open space will provide the best habitat for the majority of these wildlife species. 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. 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.

Fourteen sensitive wildlife species were observed on the property. The sensitive wildlife species observed include Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), Coastal western whiptail (*Cnemidophorus multiscultatus tigris*), Red diamond rattlesnake (*Crotalus ruber*), Cooper's hawk (*Accipiter cooperii*), White-tailed kite (*Elanus leucurus*), turkey vulture (*Cathartes aura*), loggerhead shrike (*Lanius ludovicianus*), western bluebird (*Sialia mexicana occidentalis*), yellow warbler (*Dendroica petechia*), yellow-breasted chat (*Icteria virens auricollis*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), San Diego desert woodrat (*Neotoma lepida intermedia*), southern mule deer (*Odocoileus hemionus fuliginata*), and coast horned lizard (*Phrynosoma coronatum blainvillii*). Habitat for each of these species is being preserved in open space.

4.0 Biological Resource Management

4.1 Management Goals

The management goals for the on-site biological open space include the following:

- Preserve and manage the open space lands to the benefit of the flora, fauna, and native ecosystem functions reflected in the natural communities occurring within the RMP land.
- Manage the land for the benefit of sensitive plant and wildlife species and existing natural communities, without substantive efforts to alter or restrict the natural course of habitat development and dynamics.
- Reduce, control, and where feasible, eradicate non-native, invasive flora and/or fauna known to be detrimental to native species and/or the local ecosystem.
- Maintain the character and function of certain agricultural areas within the wetland buffer and open space area.

4.2 Biological Management Tasks

See Table 1.

4.3 Adaptive Management

The Resource Manager is responsible for interpreting the results of site monitoring to determine the ongoing success of the RMP. If it is necessary to modify the plan between regularly scheduled updates, plan changes shall be submitted to the County and agencies for approval as required.

4.4 Operations, Maintenance, and Administration Tasks

See Table 1.

4.5 Public Use Tasks

See Table 1.

4.6 Fire Management Tasks

See Table 1.

5.0 Cultural Resource Management

The cultural resources on-site were analyzed by Affinis in the 2014~~3~~ technical report Cultural Resources Inventory and Assessment: Lilac Hills Ranch, Escondido, San Diego County, California. Under the proposed project, 104.1~~3.6~~ acres of the project site (17 percent) will be designated as archaeological and biological open space. Two~~One~~ archaeological site~~s~~ will be preserved within dedicated open space~~as a significant resource~~ on-site. Site CA-SDI-18362 ~~as it~~ contains important data related to regional prehistory and/or history and is deemed significant according to the California Environmental Quality Act (CEQA) and RPO. ~~One additional archaeological s~~Site CA-SDI-20436 is a significant resource under CEQA and is of cultural importance to the Native American community~~ and is outside the grading footprint of the project, although it is not within dedicated open space~~.

5.1 Management Elements and Goals

5.1.1 Cultural Resources ~~Element:~~ Goals and Tasks

~~One~~ Two sensitive cultural resource sites will be preserved within a dedicated open space area. Site CA-SDI-20436 and a~~A~~ portion of site CA-SDI-18362 ~~was~~ were determined significant as ~~it~~ they contain~~s~~ important regional prehistory and/or history considered under CEQA criteria. CA-SDI-20436 is of cultural importance to the Luiseño community as well. The goal is to preserve these two cultural resources sites in perpetuity. The tasks below are provided pursuant to that goal.

~~5.1.2 Archeological Element: Two Archaeological Sites~~

~~Two significant archaeological sites were determined by unique archaeological and historical resources as defined by CEQA and the County of San Diego RPO. One site (CA-SDI-18362) is in open space and one (CA-SDI-20436) is outside the development area of the project.~~

5.1.1~~2~~ Goal: Protection of two ~~prehistoric~~ cultural resource sites.

> Task 1: One site (CA-SDI-18362) is within open space and is adequately protected by dense vegetation. One site (CA-SDI-20436) is also in open space but not protected by dense vegetation. Natural vegetative barriers will be placed around CA-SDI-20436 to limit access to the site.~~outside the grading and development footprint of the project.~~
>
> Task 2: No brushing or thinning, trail development or use of mechanical equipment in the event of a brush fire or for any other purpose will be allowed within 20 meters of the rock room feature at CA-SDI-18362 or CA-SDI-20436.
>
> Task 3: Construct and maintain trail signage and fencing to limit access to the two archaeological sites (see Table 1). Signage shall not identify the location of sites or acknowledge their presence but will indicate the presence of environmentally sensitive areas.

5.1.2~~3~~ Management Constraints

Management constraints include ensuring that cultural resource~~prehistoric~~ sites are adequately protected and do not conflict with the implementation of this plan. Coordination between the lead biological manager and the lead archaeologist will be critical to ensure that conflicts do not occur.

5.2 Cultural Resources Monitoring Element: Goals and Tasks

CULTURAL RESOURCES ELEMENT: Archaeological and Historical sites

Scheduled monitoring of cultural resources shall be conducted. An annual report summarizing these activities will be submitted to the County at the end of each year.

5.2 Goal: Monitor Archaeological Sites

Task 1: Allow Native American access annually

Task 2: Monitor and document all natural impacts annually

Task 3: Monitor and document all human impacts annually

Task 4: Monitor and document the condition of signage and fencing annually

6.0 References Cited

Affinis
2014 Cultural Resources Inventory and Assessment: Lilac Hills Ranch, Escondido, San Diego County, California.

RECON
2014~~2~~ Biological Resources Report for Lilac Hills Ranch.

San Diego Association of Governments (SANDAG)
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1973 *Soil Survey, San Diego Area, California*. Edited by Roy H. Bowman. Soil Conservation Service and Forest Service.

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ATTACHMENT 18

Conceptual Resource Management Plan for Off-site Biological Open Space

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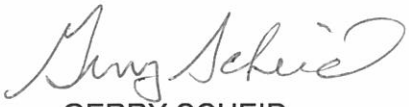
CONCEPTUAL BIOLOGICAL RESOURCES MANAGEMENT PLAN FOR OFF-SITE HABITAT MITIGATION LILAC HILLS RANCH SAN DIEGO COUNTY, CALIFORNIA

SPECIFIC PLAN
GENERAL PLAN AMENDMENT
REZONE
EIR
TENTATIVE MAP (MASTER)
TENTATIVE MAP (PHASE 1 IMPLEMENTING TM)
MAJOR USE PERMIT

PROJECT APPLICANT:
ACCRETIVE INVESTMENTS, INC.
12275 EL CAMINO REAL, SUITE 110
SAN DIEGO, CA 92130
ATTN: JON RILLING
PH: 858-546-0700

PREPARED FOR:
COUNTY OF SAN DIEGO
5510 OVERLAND AVENUE, THIRD FLOOR
SAN DIEGO, CALIFORNIA 92123
KIVA PROJECT: 09-0112513
SP 3810-12-001
GPA 3800-12-001
REZ 3600-12-003
TM 5571 RPL3 and 5572 RPL3
MUP 3300-12-005

PREPARER:



GERRY SCHEID
COUNTY-APPROVED BIOLOGIST

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619-308-9333

MAY 23, 2013

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FIGURES

TABLES

Terms and Acronyms

CNDDB	California Natural Diversity Data Base
County	County of San Diego
CPA	Community Planning Area
CRMP	Conceptual Resources Management Plan
DPLU	Department of Planning and Land Use
DPR	Department of Park and Recreation
DPU	Department of Public Utilities
DPW	Department of Public Works
HOA	Home Owners Association
I-15	Interstate 15
MOU	Memorandum of Understanding
MSCP	Multiple Species Conservation Program
PAMA	Pre-Approved Mitigation Area
RMP	Resource Management Plan
SANDAG	San Diego Association of Governments
USDA	United States Department of Agriculture
USGS	U.S. Geological Survey

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1.0 Introduction

This Conceptual Resource Management Plan (CRMP) has been prepared for the proposed Lilac Hills Ranch project in accordance with the mitigation requirements identified in the Lilac Hills Ranch Biological Resources Report (RECON 2012). This document is consistent with the format and content requirements of the "County of San Diego Report Format and Content Requirements – Conceptual Biological Resources Management Plan" (2010). This CRMP covers the management of the habitats to be purchased at an off-site location to meet mitigation requirements for project impacts to habitats and vegetation communities.

1.1 Purpose of Conceptual Resource Management Plan

The purpose of this CRMP is to provide direction for the permanent preservation and management of the habitat purchased off-site to meet project mitigation requirements. This off-site habitat purchase would total 70.3 acres and consist of upland habitats.

More specifically, the plan will accomplish the following:

1. The plan will guide management of vegetation communities/habitats, plant and animal species, and programs described herein to protect and, where appropriate, enhance biological.

2. The plan will guide appropriate public uses of the property (if public uses are included).

3. The plan will provide an overview of the operation, maintenance, administrative and personnel requirements to implement management goals, and serves as a budget planning aid.

The off-site preservation of the 70.3 acres of native upland vegetation communities will be sufficient to provide in-kind mitigation opportunities for significant impacts to these communities from the Lilac Hills Ranch project. The off-site preservation area will be conveyed with an easement to the County of San Diego (County). The underlying fee title will be conveyed to a non-profit entity that is acceptable to the County Department of Planning and Land Use (DPLU).

1.1.1 Conditions and/or Mitigation Measures that Require CRMP

A CRMP is required for projects in the County when a planned project proposes open space preservation that would significantly benefit from active management and/or monitoring of biological and/or cultural resources. A CRMP is always required when a project proposes open space totaling more than 50 acres or more, regardless of the presence or absence of sensitive species. In the case of the Lilac Hills Ranch project, both of these parameters apply.

The details of this CRMP may be modified when the Final Resource Management Plan (RMP) is prepared and submitted to the County for approval. The County will review the Final RMP to ensure that it meets the specified Purpose and Objectives.

1.1.2 Agency Review and Coordination

This document was written in collaboration with the County of San Diego and Accretive Investments, Inc. The management of the off-site preservation area, as detailed in this CRMP, does not interfere with mitigation and monitoring requirements mandated by the California Department of Fish and Game, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Regional Water Quality Control Board, or by any other permitting agency.

1.2 Implementation

1.2.1 Responsible Parties and Designation of Resource Manager (RM)

The project property is owned by the following entity:

Accretive Investments, Inc.
12275 El Camino Real, Suite 110
San Diego, CA 92130

This CRMP will be implemented and managed by one of the following resource managers:

- Conservancy group
- Natural resources land manager
- Natural resources consultant

- County Department of Parks and Recreation
- County Department of Public Works
- Federal or State Wildlife Agency (U.S. Fish and Wildlife Service, California Department of Fish and Game)
- Federal Land Managers, including but not limited to Department of Parks and Recreation, Watershed Management or Department of Public Works
- City Land Managers, including but not limited to Departments of Public Utilities (DPU), Park and Recreation, and Environmental Services.

If the developer desires the County Department of Park and Recreation (DPR) to manage the land, the following criteria must be met:

1. The land must be located inside a Pre-approved Mitigation Area (PAMA) or proposed PAMA, or otherwise deemed acceptable by DPR.
2. The land must allow for public access.
3. The land must allow for passive recreational opportunities such as a trails system.

The resource manager shall be approved in writing by the Director of Planning and Land Use, Director of Public Works/Department of Public Works (DPW), or the Director of Parks and Recreation/DPR. Any change in the designated resource manager shall also be approved in writing by the director of the County department that originally approved the resource manager. Appropriate qualifications for resource managers include, but are not limited to:

- Ability to carry out habitat monitoring or mitigation activities.
- Fiscal stability including preparation of an operational budget (using an appropriate analysis technique) for the management of this CRMP.
- Have at least one staff member with a biological, ecological, or wildlife management degree from an accredited college or university, or have a Memorandum of Understanding (MOU) with a qualified person with such a degree.
- If cultural sites are present, have a cultural resource professional on staff or an MOU with a cultural consultant.
- Experience with habitat and cultural resource management in southern California.

Restoration Entity:

If revegetation/restoration activities are required, management responsibility for the revegetation/restoration area shall remain with the restoration entity until revegetation/restoration has been completed. Upon County/Agency acceptance of the revegetated/restored area, management responsibility for the revegetation/restoration area will be transferred to the resource manager.

1.2.2 Financial Mechanism

Acceptable financial mechanisms include the following:

- Special District. Formation of a Lighting and Landscape District or Zone, or Community Facility District as determined appropriate by the Director of DPLU, DPW, or DPR.
- Endowment. A one-time non-wasting endowment, which is tied to the property, to be used by the resource manager to implement the RMP.
- Other acceptable types of mechanisms including annual fees, to be approved by the Director of DPLU, DPW, or DPR.
- Transfer of ownership to existing entity (e.g., Borrego Foundation, Cleveland National Forest, City of San Diego) for management.

1.2.3 Conceptual Cost Estimate

See Table 1.

TABLE 1
BIOLOGICAL RESOURCES MANAGEMENT TASKS

Check if Applies	Tasks	Frequency (Times per Year)	Hours Required per Year
Biological Tasks			
X	Baseline inventory of resources (if original inventory is over 5 years old)	One time	80 hrs
X	Update biological mapping.	Once every 5 years	40 hrs
	Update aerial photography.	Once every xx years	
X	Removal of invasive species.	Quarterly/annually	80 hrs/320 hrs
	Predator control	Monthly/quarterly/ annually	
	Habitat Restoration / Installation	Installation	
	Habitat Restoration / Monitoring and Management	Monthly/quarterly	
	Poaching control	Monthly/quarterly	
	Species Surveys	Once every xx years	
	Species management	***(add frequency)***	
	Noise management, if required	***(add frequency)***	
X	Biological Resource Monitoring	Quarterly	160 hrs
Operations, Maintenance, and Administration Tasks			
X	Establish and maintain database and analysis of data.	Annually	40 hrs
X	Write and submit annual report to County.	Annually	40 hrs
X	Submit review fees for County review of annual report.	Annually	
X	Review and if necessary, update management plan.	Every 5 years	40 hrs
	Construct permanent signs.	One time	
	Replace signs.	Xx signs per year	
	Construct permanent fencing/gates	One time	
	Maintain permanent fencing/gates.	***(add frequency)***	
X	Remove trash and debris.	Annually	200 hrs
	Coordinate with DEH and Sheriff.	***(add frequency)***	
	Maintain access road.	***(add frequency)***	
	Install storm water BMPs.		
	Maintain storm water BMPs.	***(add frequency)***	
	Restore built structure.	One time	
	Maintain built structure.	***(add frequency)***	
	Maintain regular office hours.	***(add frequency)***	
	Inspect and service heavy equipment and vehicles.	***(add frequency)***	

TABLE 1
BIOLOGICAL RESOURCES MANAGEMENT TASKS

Check if Applies	Tasks	Frequency (Times per Year)	Hours Required per Year
	Inspect and repair buildings, residences, and structures.	***(add frequency)***	
	Inspect and maintain fuel tanks.	***(add frequency)***	
	Coordinate with utility providers and easement holders.	***(add frequency)***	
	Manage hydrology (as required).	***(add frequency)***	
	Coordinate with law enforcement and emergency services (e.g., fire).	***(add frequency)***	
	Coordinate with adjacent land managers.	***(add frequency)***	
	Remove graffiti and repair vandalism.	***(add frequency)***	
Public Use Tasks			
	Construct trail(s).		
	Monitor, maintain/repair trails (unless a trails easement has been granted to the County).	***(add frequency)***	
	Control public access.	***(add frequency)***	
	Provide Ranger patrol.	***(add frequency)***	
	Provide visitor/interpretive services.	***(add frequency)***	
	Manage fishing and/or hunting program (if one is allowed).	***(add frequency)***	
	Provide Neighbor Education – Community Partnership.	***(add frequency)***	
	Prepare and reproduce trail maps and interpretive materials.	***(add frequency)***	
	If HOA is funding management, provide annual presentation to HOA.	Annually	
	Coordinate volunteer services.	***(add frequency)***	
	Provide emergency services access/response planning.	***(add frequency)***	
Fire Management Tasks			
X	Coordinate with applicable fire agencies and access (gate keys, etc.) for these agencies.	Annually	20 hrs
	Plan fire evacuation for public use areas.	One time	
	Protect areas with high biological importance.	***(add frequency)***	
	Hand-clear vegetation.	***(add frequency)***	
	Mow vegetation.	***(add frequency)***	

TABLE 1
BIOLOGICAL RESOURCES MANAGEMENT TASKS

Check if Applies	Tasks	Frequency (Times per Year)	Hours Required per Year
Post-fire Tasks			
X	Control post-fire erosion.	After each fire event	400 hrs
X	Remove post-fire sediment.	After each fire event	400 hrs
X	Reseed after fire.	After each fire event	200 hrs
X	Replant after fire.	After each fire event	400 hrs

1.2.4 Reporting Requirements

An RMP Annual Report will be submitted to the County (and resource agencies, as applicable), along with the submittal fee to cover County staff review time. The Annual Report shall discuss the previous year's management and monitoring activities, as well as management/monitoring activities anticipated in the upcoming year.

The Annual Report shall provide a concise but complete summary of all management and monitoring methods, identify any new management issues, and address the success or failure of management approaches (based on monitoring). The report will include a summary of changes from baseline or previous year conditions for species and habitats, and address any monitoring and management limitations, including weather (e.g., drought). The report shall also address any adaptive management (changes) resulting from previous monitoring results and provide a methodology for measuring the success of adaptive management.

For new sensitive species observations or significant changes to previously reported species, the Annual Report shall include copies of completed California Natural Diversity Database (CNDDB) forms with evidence that they have been submitted to the State. The report shall also include copies of invasive plant species forms submitted to the State or County.

A fee for staff's review time will be collected by DPLU upon submittal of the Annual Report. The RMP may also be subject to an ongoing deposit account for staff to address management challenges as they arise. Deposit accounts, if applicable, must be replenished to a defined level as necessary.

1.2.5 RMP Agreement

The County will require an Agreement with the applicant when an RMP is required. The Agreement will be executed when the County accepts the final RMP. The Agreement will obligate the applicant to implement the RMP and provide a source of funding to pay the cost to implement the RMP in perpetuity. The Agreement shall also provide a

mechanism for the funds to be transferred to the County if the resource manager fails to meet the goals of the RMP.

The Agreement will specify that RMP funding or funding mechanism be established prior to the following milestones:

- For subdivisions, prior to the approval of grading or improvement plans, or prior to approval of the Parcel/Final Map, whichever is first.

- For permits, prior to construction or use of the property in reliance of the permit.

1.2.6 Limitations and Constraints

Specific internal or external management constraints that may affect meeting RMP goals have not been identified for this CRMP. Examples of potential constraints that may be applicable include, but are not limited to, the following:

- Environmental factors such as the influence of local water availability (either surface or subsurface waters); introduction or spread of non-native species; and presence of threatened or endangered species, fire, flood, drought, erosion, air pollution, and hazardous waste materials.

- Legal, political, or social factors that influence or mandate certain types of management; special permitting requirements (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, archeological sites, etc.); County Ordinances (e.g., nuisance abatement); and MOUs or other special agreements with private or public entities, water, timber, or mineral rights for the area.

- Financial factors such as the source of funding to be used for operation and maintenance, personnel requirements, and overall management of the area (fund source may dictate management direction).

2.0 Property Description

2.1 Legal Description

The proposed Lilac Hills Ranch project site 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 0.5 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).

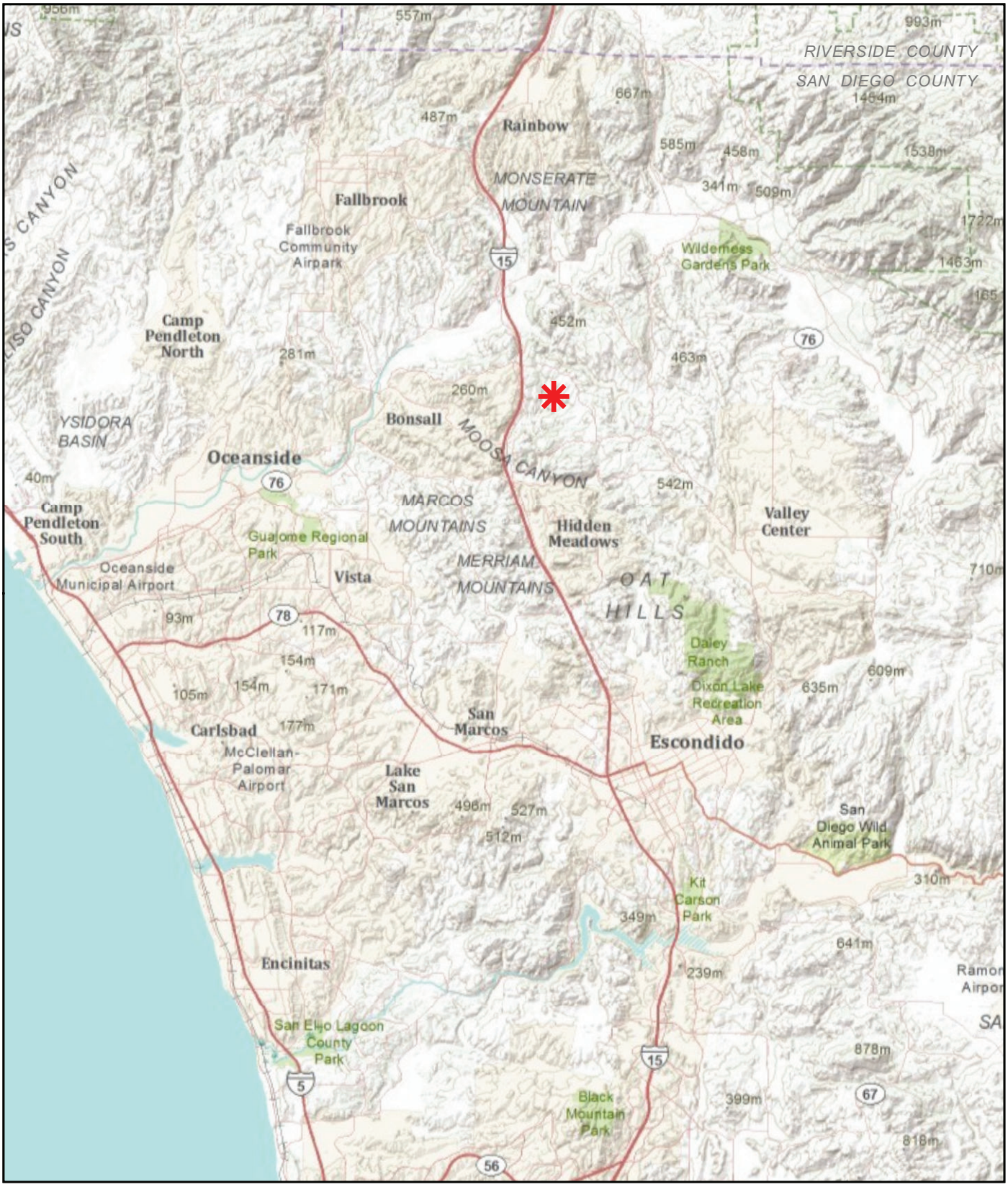
2.2 Environmental Setting

The following information is summarized from the biological resource report for the Lilac Hills Ranch project dated September 2012 by RECON (RECON 2012). 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-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; San Diego Association of Governments [SANDAG] 1995). Sandy loam and coarse sandy loam soils in the following soil series are present: Bonsall, Cieneba, Fallbrook, Greenfield, Placentia, Ramona, Visalia, and Vista (Figure 3). 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.



Project Location

FIGURE 1

Regional Location

RECON

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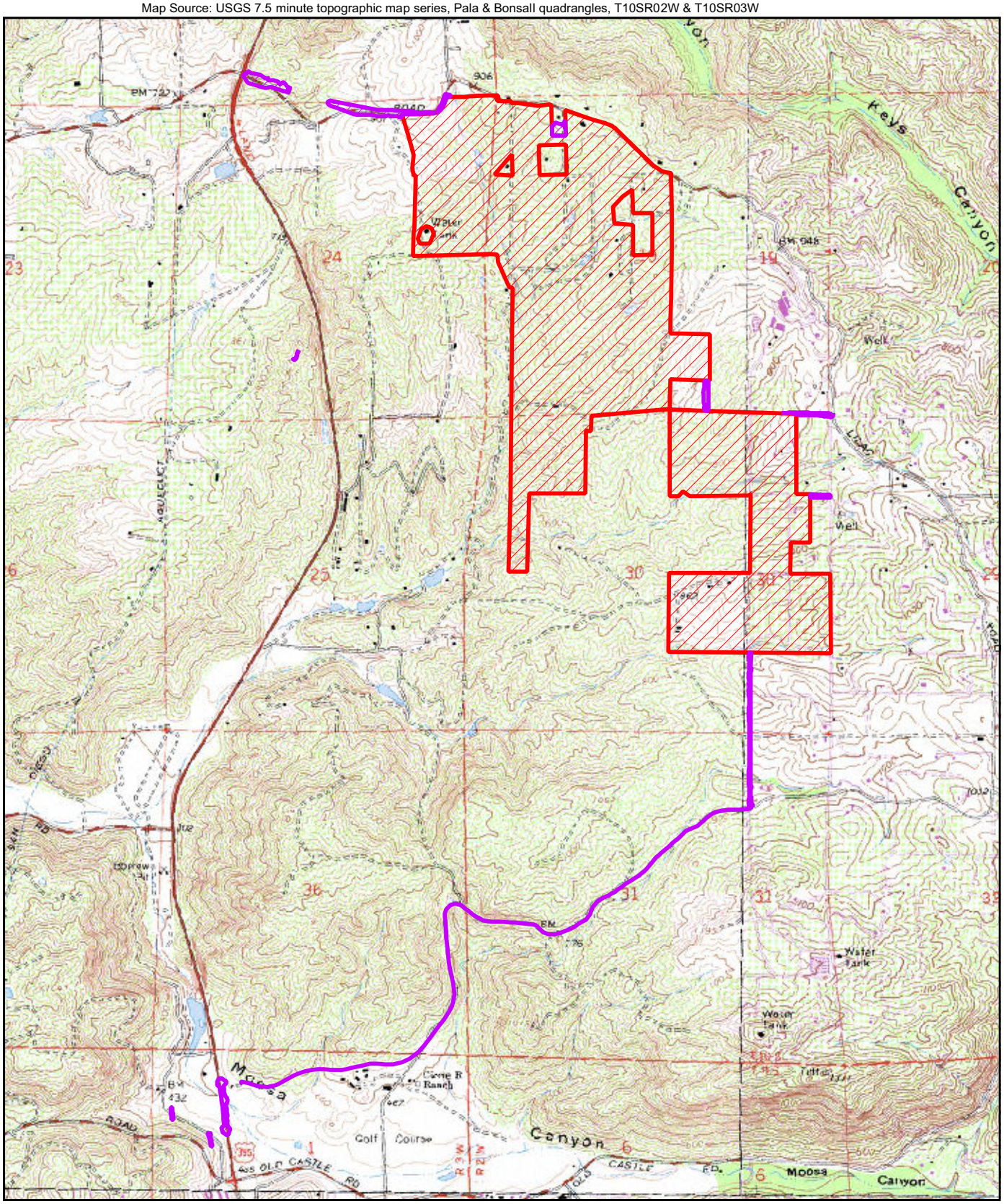
Map Source: USGS 7.5 minute topographic map series, Pala & Bonsall quadrangles, T10SR02W & T10SR03W



0 Feet 2,000

Project Boundary

Off-site Improvement Areas

RECON

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FIGURE 2

Project Location on USGS Map

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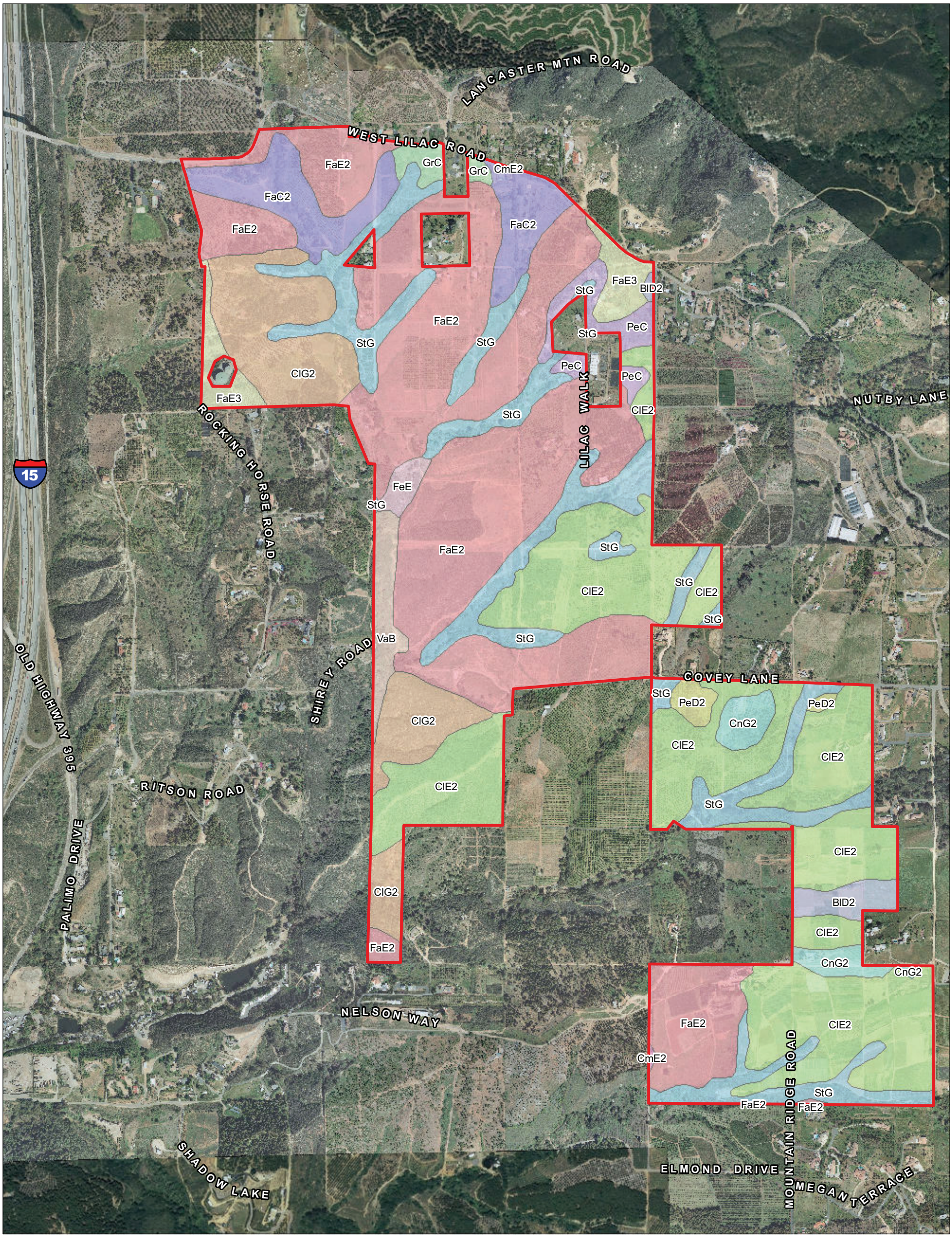
Image source: Custom image provided by client (flown March 2012), and Aerials Express, All Rights Reserved (flown March 2010)



Project Boundary

Soil Classification

- BlD2 - Bonsall sandy loam, 9 to 15 % slopes, eroded
- ClE2 - Cieneba coarse sandy loam, 15 to 30 % slopes, ero ded
- ClG2 - 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 3

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Soils

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The Lilac Hills Ranch project area is located within the proposed North County Multiple Species Conservation Program (MSCP) area (Figure 4). 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.

2.3 Land Use

Existing on-site land uses include agricultural activities, consisting mostly of citrus and avocado groves and taking up most of the central and southern portions, or about 54 percent of the site. There are several homes, sheds, and agricultural buildings scattered throughout the site, none of which is historic. 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.

Land uses on adjacent properties are similar to that of the project site. Agricultural uses dominate the landscape with small remnant patches of native habitat occurring primarily along drainage courses and steep slopes.

No existing hiking trails occur on the project site. Public access is restricted, as the land is privately owned. The project area includes two locations that are covered by relatively small open space easements that occur outside of a PAMA.

3.0 Biological Resources Description

The location of the off-site habitat preservation area has not been determined at this time. Once an appropriate habitat area is identified, a biological resource survey will be required to document the condition of the biological resources on-site and evaluate the consistency of these resources with the required mitigation.

3.1 Criteria for Off-Site Selection of Vegetation Communities/Habitats

The selection of off-site lands for preservation to meet mitigation for habitat/vegetation community impacts must meet the following criteria:

1. The off-site habitat lands must be located within a proposed North County MSCP PAMA or within an approved mitigation bank located within northern San Diego County.

2. Every attempt will be made to provide mitigation at a single site within the Valley Center Community Plan area.

3. The off-site preserve area will consist of the habitat types and acreages provided in Table 2.

TABLE 2
OFF-SITE HABITAT/VEGETATION COMMUNITIES REQUIREMENTS

Habitat/Vegetation Community	Off-site Mitigation Acreage
Coast live oak woodland	1.2
Coastal sage scrub	41.4
Southern mixed chaparral	27.7
Total	70.3

4. A biological resource survey must be conducted on the proposed preserve area to document and verify that the habitats are similar or better in quality to those being impacted and that they support similar plant and wildlife species.

5. The mitigation land will be managed and maintained according to the Final Resource Management Plan for the off-site preserve area.

4.0 Biological Resource Management

4.1 Management Goals

The management goals for the on-site Biological Open Space include the following:

- Preserve and manage the open space lands to the benefit of the flora, fauna, and native ecosystem functions reflected in the natural communities occurring within the RMP land.

- Manage the land for the benefit of sensitive plant and wildlife species and existing natural communities, without substantive efforts to alter or restrict the natural course of habitat development and dynamics.

- Reduce, control, and where feasible, eradicate non-native, invasive flora and/or fauna known to be detrimental to native species and/or the local ecosystem.

Image source: Custom image provided by client (flown March 2012), and Aerials Express, All Rights Reserved (flown March 2010)

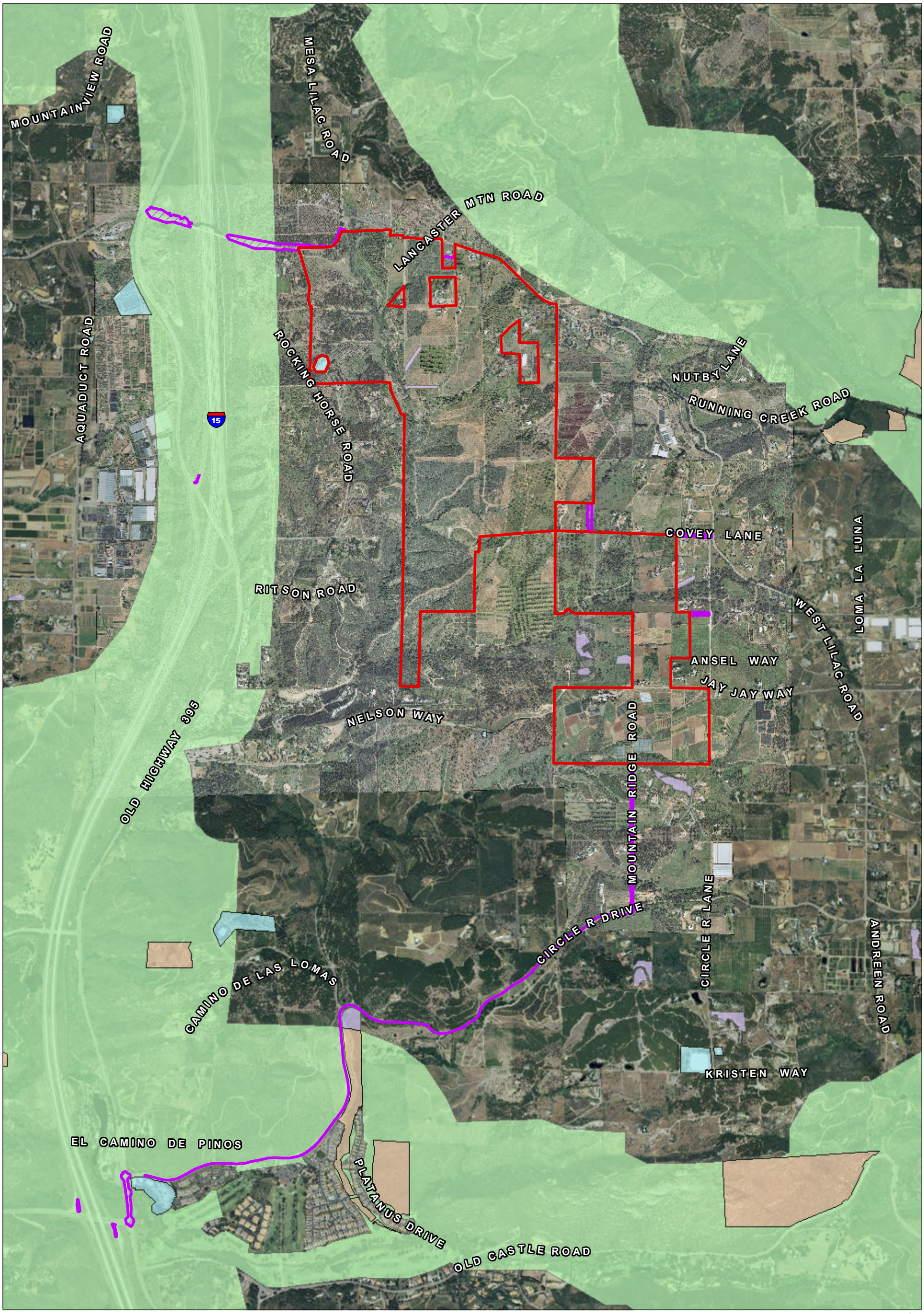

FIGURE 4

Project Area in Relation to Draft North County MSCP
(MSCP Currently Not Approved)

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4.2 Biological Management Tasks

See Table 1.

4.3 Adaptive Management

The Resource Manager is responsible for interpreting the results of site monitoring to determine the ongoing success of the RMP. If it is necessary to modify the plan between regularly scheduled updates, plan changes shall be submitted to the County and agencies for approval as required.

4.4 Operations, Maintenance, and Administration Tasks

See Table 1.

4.5 Public Use Tasks

See Table 1.

4.6 Fire Management Tasks

See Table 1.

5.0 References Cited

RECON Environmental, Inc.
2012 Biological Resources Report—Lilac Hills Ranch, Escondido, California. September.

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