## 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: 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 RPL43 and 5572 RPL43
MUP 3300-12-005

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June 4, 2014 June 5, 2013



## **TABLE OF CONTENTS**

Glos	ssary	of Te	rms and Acronyms	Vİ
1.0	Intr	oducti	on	1
	1.1	Purpo	ose of the Report	1
	1.2	Proje	ct Location and Description	1
	1.3	Surve	y Methodologies	5
		1.3.2	Literature Review Biological Resource Surveys Focused Surveys	5
	1.4	Envir	onmental Setting (Existing Conditions)	10
		1.4.2 1.4.3 1.4.4 1.4.5 1.4.6 1.4.7	Regional Context Habitat Types/Vegetation Communities Flora Fauna Sensitive Plant Species Sensitive Animal Species Wetlands/Jurisdictional Waters Habitat Connectivity and Wildlife Corridors	12 12 30 30 31 32 35 49
	1.5	Appli	cable Regulations	50
		1.5.2	Federal Regulations State of California County of San Diego	51 51 53
2.0	Pro	ject Ef	ifects	55
	2.1	Impac	cts to Habitats and Vegetation Communities	55
	2.3	Impad	cts to Sensitive Species	64
		2.3.1 2.3.2	Impacts to Sensitive Plants Impacts to Sensitive Wildlife	64 65
	2.4	Impa	cts to Wildlife Corridors, Linkages, and Nursery Sites	73
3.0	Spe	cial S	tatus Species	75
	3.1	Guide	elines for Determination of Significance	75
	3.2	Analy	sis of Project Effects	75
		3.2.1 3.2.2	Impacts to Federal and State Listed Species Impacts to County List A or B Plants, County Group 1 Animals, or Species Listed as a State Species of Special Concern	75 75

RECON

		3.2.3	Impacts to County List C or D Plants, County Group 2 Animals Species	80
		3.2.4	Impacts to Arroyo Toad Aestivation, Foraging, or	00
			Breeding Habitat	81
			Impacts to Golden Eagle Habitat	81
			Impacts to Nesting and Functional Foraging Habitat for Raptors	81
			Impacts to Core Wildlife Area	81
		3.2.8	Assessment of Indirect Impacts to Proposed and Existing	00
		3.2.9	Open Space Areas Impacts to Burrowing Owl Habitat	82 82
			Impacts to Burrowing Owi Habitat Impacts to Cactus Wren Habitat	83
			Impacts to Gactus Wich Habitat  Impacts to Hermes Copper Habitat	83
			Impacts to Sensitive Bird Nesting	83
	3.3		lative Impact Analysis	83
	3.4	Mitiga	tion Measures and Design Considerations	91
		3.4.1	Plant Species	92
		3.4.2	Animal Species	92
	3.5	Concl	usions	92
4.0	Rip	arian F	labitat or Sensitive Natural Community	93
	4.1	Guide	lines for Determination of Significance	93
	4.2	Analys	sis of Project Effects	93
	4.2	<b>Analys</b> 4.2.1	Direct Impacts to Riparian Habitat or Sensitive Natural	
	4.2	4.2.1	Direct Impacts to Riparian Habitat or Sensitive Natural Communities	<b>93</b> 93
	4.2	4.2.1	Direct Impacts to Riparian Habitat or Sensitive Natural Communities Impacts to Jurisdictional Wetlands/Riparian Habitats –	93
	4.2	4.2.1 4.2.2	Direct Impacts to Riparian Habitat or Sensitive Natural Communities Impacts to Jurisdictional Wetlands/Riparian Habitats – USACE, CDFG, County of San Diego	93 93
	4.2	4.2.1 4.2.2 4.2.3	Direct Impacts to Riparian Habitat or Sensitive Natural Communities Impacts to Jurisdictional Wetlands/Riparian Habitats – USACE, CDFG, County of San Diego Impacts to Groundwater	93
	4.2	4.2.1 4.2.2 4.2.3	Direct Impacts to Riparian Habitat or Sensitive Natural Communities Impacts to Jurisdictional Wetlands/Riparian Habitats – USACE, CDFG, County of San Diego	93 93
	4.2	4.2.1 4.2.2 4.2.3 4.2.4	Direct Impacts to Riparian Habitat or Sensitive Natural Communities Impacts to Jurisdictional Wetlands/Riparian Habitats – USACE, CDFG, County of San Diego Impacts to Groundwater Potential Indirect Impacts to Riparian Habitat or Sensitive	93 93 94
		4.2.1 4.2.2 4.2.3 4.2.4 4.2.3	Direct Impacts to Riparian Habitat or Sensitive Natural Communities Impacts to Jurisdictional Wetlands/Riparian Habitats – USACE, CDFG, County of San Diego Impacts to Groundwater Potential Indirect Impacts to Riparian Habitat or Sensitive Natural Communities	93 93 94 94
		4.2.1 4.2.2 4.2.3 4.2.4 4.2.3 Cumu	Direct Impacts to Riparian Habitat or Sensitive Natural Communities Impacts to Jurisdictional Wetlands/Riparian Habitats – USACE, CDFG, County of San Diego Impacts to Groundwater Potential Indirect Impacts to Riparian Habitat or Sensitive Natural Communities Wetland Buffers	93 93 94 94 95

ii RECON

5.0	Jur	isdicti	onal Waters and Waterways	103
	5.1	Guide	elines for Determination of Significance	103
	5.2	Analy	sis of Project Effects	103
		5.2.1 5.2.2	Impacts to Jurisdictional Wetlands/Riparian Habitats –	103
		5.2.3 5.2.4	I e e e e e e e e e e e e e e e e e e e	104 104
			Waterways Wetland Buffers	104 105
	<b>5</b> 2	_		105
	5.5	5.3 Cumulative Impact Analysis		
	5.4	Mitiga	ation Measures and Design Considerations	107
	5.5	Concl	lusions	108
6.0	Wil	dlife M	lovement and Nursery Sites	109
	6.1	Guide	elines for Determination of Significance	109
	6.2	Analy	sis of Project Effects	109
		6.2.1	Impacts to Wildlife Access to Foraging Habitat, Breeding Habitat, and Water Sources Necessary for Reproduction	110
		6.2.2	Impacts to Connectivity of Blocks of Habitat and Local/ Regional Wildlife Corridors and Linkages	110
		6.2.3		110
		6.2.4	Impacts on Wildlife Corridors/Linkages from Noise and	4.4.0
		6.2.5	Nighttime Lighting Impacts to Wildlife Corridor/Linkage Widths	110 111
		6.2.6	Impacts to Visual Continuity of Wildlife Corridors/ Linkages	111
	6.3	Cumu	llative Impact Analysis	111
	6.4	Mitiga	ation Measures and Design Considerations	112
	6.5	Concl	lusions	113

RECON

7.0	Local Policies, Ordinances, Adopted Plans			
	7.1	Guide	lines for Determination of Significance	115
	7.2	Analy	sis of Project Effects	115
		7.2.1	Southern California Coastal Sage Scrub NCCP Process Guidelines	115
		722	Impacts to Subregional NCCPs	117
			RPO Wetlands and Sensitive Habitat Lands	117
			Mitigation and NCCP Guidelines	118
		7.2.5	Conformance to Applicable Habitat Conservation Plans, Habitat Management Plans, Special Area Management Plans,	
		7.2.6	,	118
			Resource Core Areas	118
			Habitat Connectivity, Movement Corridors, and Habitat Linkages	118
			Narrow Endemic Species and Listed Species	119
		7.2.9	Migratory Birds and Bald/Golden Eagles	119
	7.3	Cumu	lative Impact Analysis	119
	7.4	Mitiga	tion Measures and Design Considerations	120
	7.5	Concl	usions	120
8.0	Sur	nmary	of Project Impacts and Mitigation	121
9.0	Ref	erence	es	131
10.0	List	of Pre	eparers	137

iv RECON

#### **FIGURES**

1:	Regional Location	2
2:	Project Location on USGS Map	3
3:	APNs within Project Area on USGS Map	
4:	Soils	13
5:	Project Area in Relation to Draft North County MSCP	15
6a:	Vegetation Communities/Land Cover Types and Sensitive Species Locations	17
6b:	Vegetation Communities/Land Cover Types and Sensitive Species Locations	19
6c:	Vegetation Communities/Land Cover Types and Sensitive Species Locations	21
7a:	Location of USACE Waters of the U.S.	37
7b:	Location of USACE Waters of the U.S.	39
8a:	Location of CDFG/RWQCB State Waters	41
8b:	Location of CDFG/RWQCB State Waters	43
9a:	Location of County of San Diego RPO Wetlands	45
9b:	Location of County of San Diego RPO Wetlands	47
10a:	Location of Impacts to Vegetation Communities/Land Cover Types	57
10b:	Location of Impacts to Vegetation Communities/Land Cover Types	59
10c:	Location of Impacts to Vegetation Communities/Land Cover Types	61
11a:	Impacts to USACE Waters of the U.S.	65
11b:	Impacts to CDFG/RWQCB State Waters	67
11c:	Impacts to County of San Diego RPO Wetlands	69
11d:	Impacts to County of San Diego RPO Wetlands	71
12:	Location of Projects Considered for Cumulative Impacts	85
13a:	Location of Wetland Buffer	99
13b:	Location of Wetland Buffer	101
14a:	Vegetation Communities/Land Cover Types Within Biological Open Space and Locations of Potential Wetland Mitigation	123
14b:	Vegetation Communities/Land Cover Types Within Biological Open	120
140.	Space and Locations of Potential Wetland Mitigation	125
15:	Biological Open Space Plan	128
10.	Biological open opace i lan	120
TABLE	≣S .	
1:	Biological Resource Survey Information	6
2:	Existing On-Site Habitat/Vegetation Communities	23
3:	Existing Jurisdictional Waters within the Project Site	35
4:	Summary of Direct Impacts to Habitats and Vegetation Communities	56
5:	Summary of On-Site Direct Impacts to Habitats and Vegetation Communities by Project Phase	63
6:	Summary of Direct Impacts to Jurisdictional Waters within the Project Site	64
<b>7</b> :	Cumulative Project List	87
8:	Habitat/Vegetation Communities, Impacts, and Mitigation	122
9:	Summary of Mitigation Measures	127
10:	Lilac Hills Ranch On-Site Biological Open Space Dedication	
	by Development Phase	127

RECON

#### **ATTACHMENTS**

- 1: Post-Survey Notification of Focused Surveys for Least Bell's Vireo for the I-15/395 Master Planned Community MPA
- 2: Post-Survey Notification of Focused Surveys for Coastal California Gnatcatcher I-15/395 Master Planned Community MPA
- 3: Southwestern Willow Flycatcher Habitat Assessment Report
- 4: Burrowing Owl Habitat Assessment Report
- 5: Stephens' Kangaroo Rat Habitat Assessment Report
- 6: Arroyo Toad Habitat Assessment Report
- 7: Plant Species Observed on Lilac Hills Ranch
- 8: Wildlife Species Observed/Detected on Lilac Hills Ranch
- 9: Sensitive Plant Species Observed or with the Potential to Occur on Lilac Hills Ranch
- 10: CNDDB Forms
- 11: Sensitive Wildlife Species Observed or with the Potential to Occur on Lilac Hills Ranch
- 12: Jurisdictional/Wetland Delineation Report for the Lilac Hills Ranch Specific Plan and General Plan Amendment Area, Escondido, California
- 13: Addendum Letter (Sight Distance Biology Survey for Covey Lane and West Lilac Road)
- 14: Biological Open Space Signage and Trails
- 15: RPO Wetland Crossing Findings Analysis
- 16: Conceptual Wetland Revegetation Plan
- 17: Conceptual Resource Management Plan for On-site Biological Open Space
- 18: Conceptual Resource Management Plan for Off-site Habitat Mitigation

vi RECQN

## **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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Biological Resources Report for Lilac Hills Ranch

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viii RECON

## 1.0 Introduction

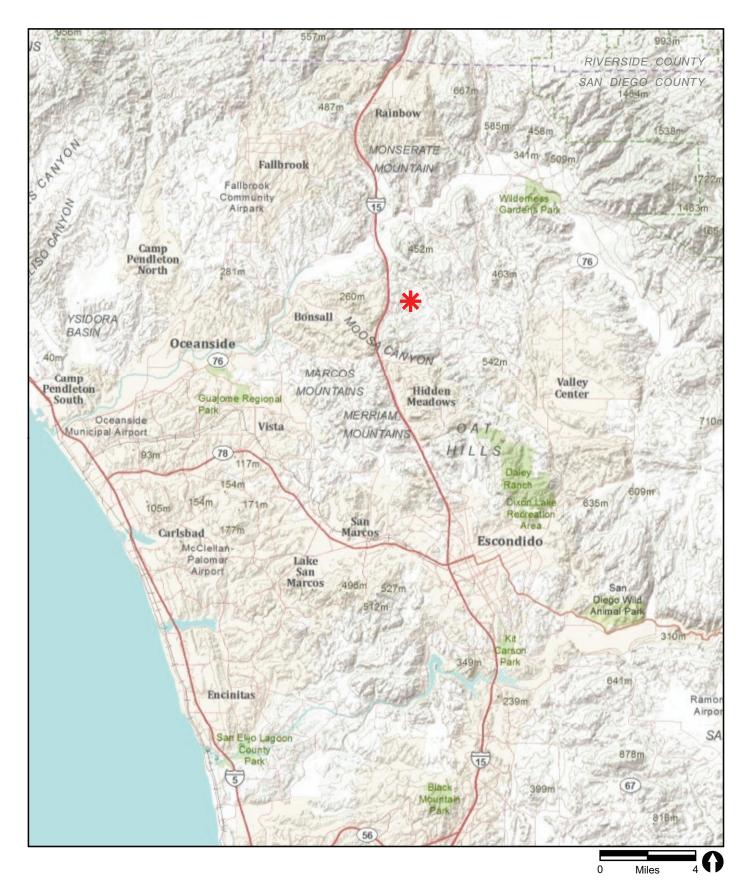
This biological technical report was prepared for the proposed Lilac Hills Ranch Specific Plan and General Plan Amendment Area. It provides the details of the existing biological resources present or potentially present on-site, discusses direct and indirect impacts to these resources from the proposed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

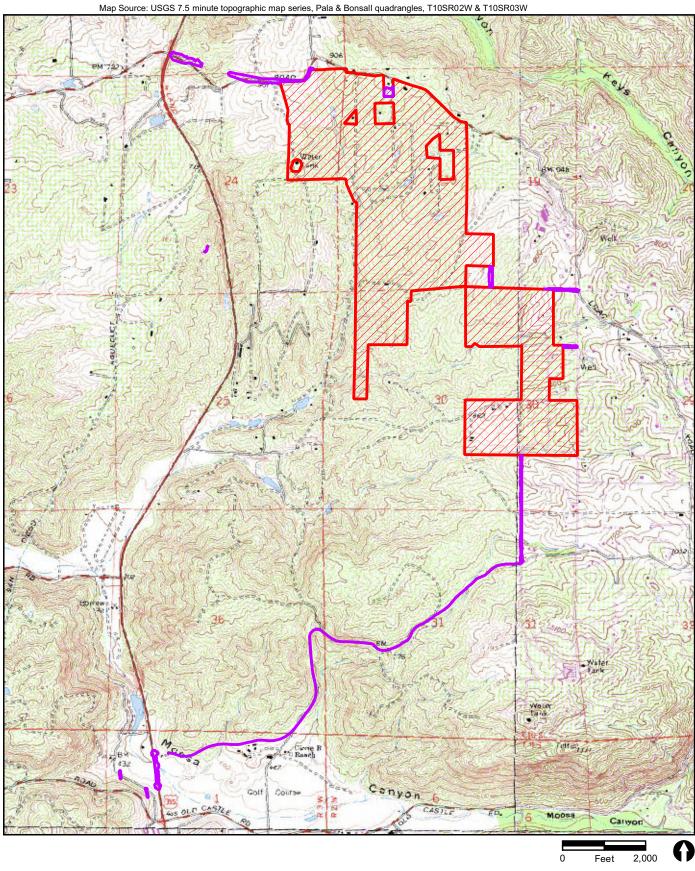
## 1.2 Project Location and Description

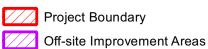
The proposed Lilac Hills Ranch community is approximately 608 acres composed of 59 contiguous properties and is located in northern unincorporated San Diego County 0.25 mile from the Interstate 15 (I-15) corridor on the east side with freeway access off the Old Highway 395 Interchange (Figure 1). The 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.

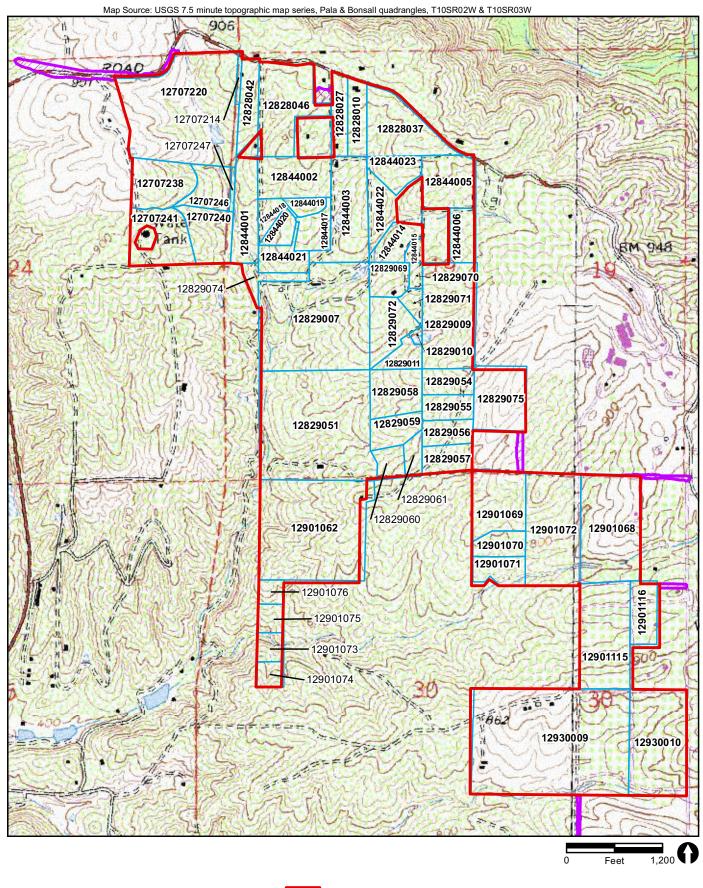












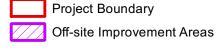


FIGURE 3

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

	1		Weather	Biologist
Survey Date	Type of Survey	Time	Conditions	Conducting Survey
February 14, 2011	Vegetation Mapping;	8:00 A.M	Conditions	AIB, EJM
1 001 001	General biology Surveys;	3:00 P.M.		7112, 20111
	SKR Habitat Assessment			
February 25, 2011	General biology Surveys;	8:00 A.M		GAS, AIB, EJM
•	Wetland Delineation; SKR	3:00 р.м.		
	Habitat Assessment			
March 1, 2011	General Biology Surveys;	8:00 A.M		GAS, AIB, EJM
	Wetland Delineation	3:00 р.м.		
March 3, 2011	General Biology Surveys;	8:00 A.M		GAS, AIB, EJM
	Hermes Copper Habitat	3:00 р.м.		
	Assessment; Wetland Delineation			
March 10, 2011	General Biology Surveys;	8:00 A.M		GAS
March 10, 2011	Hermes Copper Habitat	3:00 A.M		GAS
	Assessment; Wetland	3.00 F.W.		
	Delineation			
April 18, 2011	General Biology Surveys;	8:00 A.M		GAS
1 -, -	Hermes Copper Habitat	3:00 р.м.		
	Assessment; Wetland			
	Delineation			
April 22, 2011	General Biology Surveys;	8:00 a.m		GAS
	Hermes Copper Habitat	3:00 р.м.		
	Assessment; Wetland			
May 17, 2011	Delineation	0.20	50–53° F;	FINA MACO
May 17, 2011	LBV#1	6:30 A.M 9:30 A.M.	winds 0–1 mph;	EJM, MAO
		9.30 A.M.	cloudy conditions	
May 27, 2011	LBV#2;	7:30 A.M	57–79° F;	GAS, PAD
Way 27, 2011	Rare Plant Survey	10:30 A.M.	winds 0–1 mph;	0710, 171D
	Train Carrey		clear conditions	
June 2, 2011	Rare Plant and General	8:35 A.M	64–77° F;	GAS, EJM, MAO
	Biology Surveys; Burrowing	2:30 р.м.	winds 0-1 mph;	
	Owl Habitat Assessment		clear conditions	
June 3, 2011	Rare Plant and General	8:30 a.m	58–76° F;	GAS, EJM, MAO
	Biology Surveys; Burrowing	2:30 р.м.	winds 0–7 mph;	
	Owl Habitat Assessment	7.00	high haze	5 N4 N4 O
June 6, 2011	LBV#3	7:30 A.M	52–70° F;	EJM, MAO
		11:00 а.м.	winds 0–3 mph; clear conditions	
June 8, 2011	Rare Plant and General	9:50 A.M	62–72° F;	EJM, MAO
0011C 0, 2011	Biology Surveys	2:00 P.M.	winds 0–4 mph;	Low, w/
	Diology Curveys	2.00 1	clear conditions	
June 10, 2011	Rare Plant Survey			GAS, KOV
June 16, 2011	LBV#4;	7:15 A.M	60-70° F;	GAS, MAO
	Rare Plant Survey	11:00 а.м.	winds 0-5 mph;	
-	·		partly cloudy	
June 27, 2011	LBV#5	7:30 A.M	61–75° F;	EJM, MAO
		11:00 а.м.	winds 0–2 mph;	
		0.00	clear conditions	040
July 6, 2011	Wetland Delineation;	8:00 A.M		GAS
	General Biology Survey; Burrowing Owl Habitat	3:00 р.м.		
	Assessment			
	/ 100000HIGH	1		

Page 6 RECON

## TABLE 1 BIOLOGICAL RESOURCE SURVEY INFORMATION (continued)

Survey Date         Type of Survey         Time         Weather Conditions         Biolog Conducting           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         EJM, MAO	
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	
Assessments   5:00 p.m.	
11:00 A.M.   winds 0–1 mph;, clear conditions	
Clear conditions	
July 18, 2011 LBV#7 6:20 A.M 51–76° F; winds 0–1 mph; clear conditions	
10:00 A.M. winds 0–1 mph; clear conditions	
clear conditions	
July 18, 2011   General Biology Survey   Following   EJM. MAO	
LBV #7	
July 28, 2011 LBV#8 7:15 A.M 61–71° F; EJM, MAO	
9:55 A.M. winds 0-2 mph;	
clear conditions	
July 26, 2011 CGN#1 6:40 A.M 58–86°F; EJM, MAO	
11:45 A.M. winds 0–1 mph;	
clear conditions	
August 2, 2011 CGN#2 6:45 A.M 71–88°F; EJM, MAO	
10:30 A.M. winds 0–1 mph;	
August 9, 2011 CGN#3 6:40 A.M 56–76°F: EJM, MAO	
August 9, 2011 CGN#3 6:40 A.M 56–76°F; EJM, MAO 10:35 A.M. winds 0–4 mph;	
cloudy conditions	
August 26, 2011 Willow Flycatcher and 10:00 A.M GAS, JCL	
Burrowing Owl Habitat 3:00 P.M.	
Assessment	
January 11, 2012 Vegetation Mapping; 8:00 A.M GAS	
Wetland Delineation 4:00 P.M.	
February 14, 2012 Vegetation Mapping; 8:00 A.M GAS	
Wetland Delineation 4:00 P.M.	
March 21, 2012 General Surveys, Habitat 8:00 A.M GAS	
Assessments 4:00 P.M.	
June 29, 2012 General Surveys – Habitat 8:00 A.M GAS, BP	
Assessments: Offsite Road 4:00 P.M.	
Improvement Areas,	
July 2, 2012 General Surveys – Habitat 8:00 A.M GAS, BP	
Assessments: Offsite 4:00 P.M.	
Road/Utility Improvement	
Areas,	

#### **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*).

Page 8 RECON

#### 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.

Page 10 RECON

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

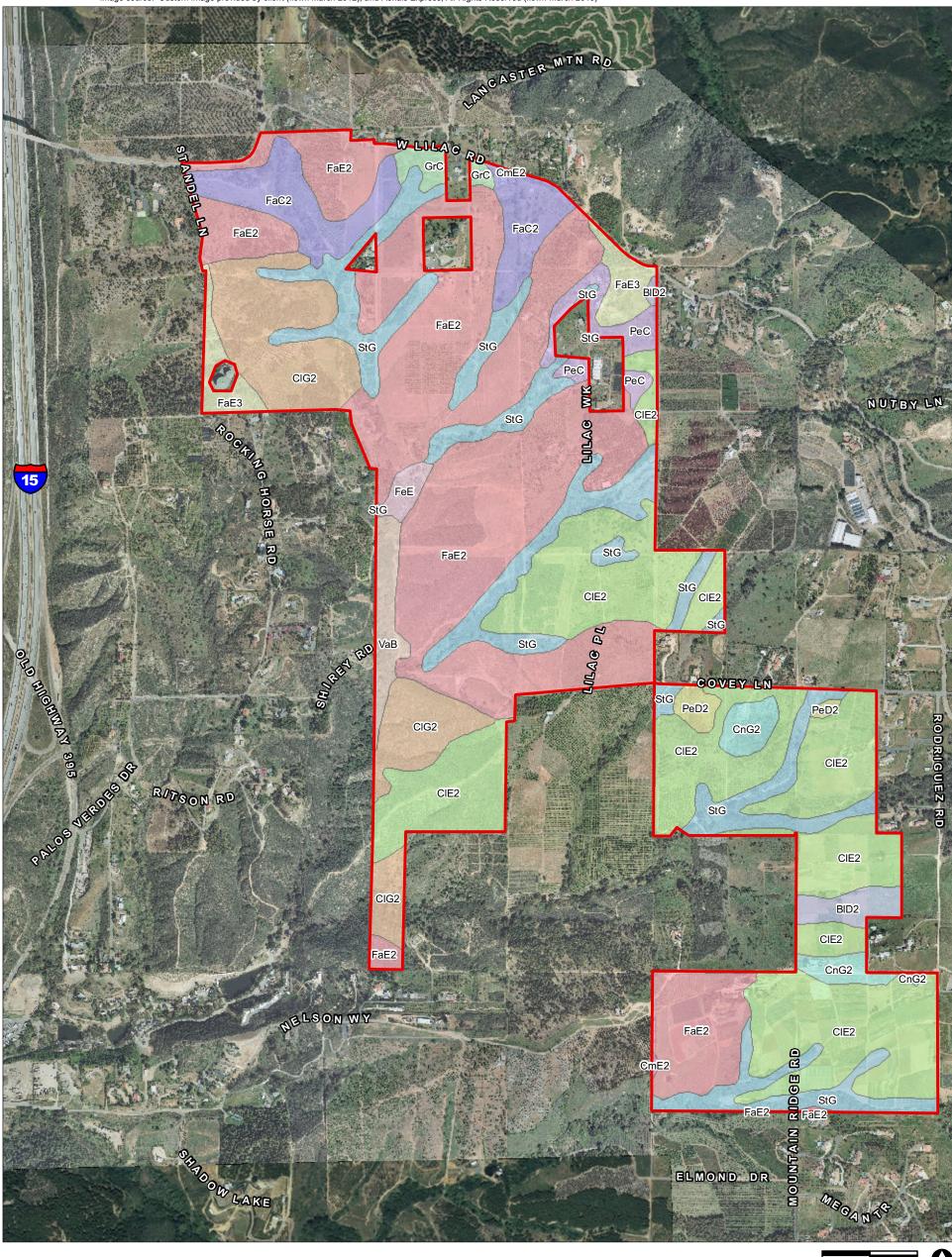
The Lilac Hills Ranch project area is located within the proposed North County Multiple Species Conservation Program (MSCP) area (County of San Diego 2009; see Figure 5). It is outside of and south of the proposed Pre-Approved Mitigation Areas (PAMA) that are located to north (Keys Canyon) and west (I-15 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.

Page 12 RECON





### 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

 $\mbox{PeD2}$  - Placentia sandy loam, 9 to 15 % slopes, eroded

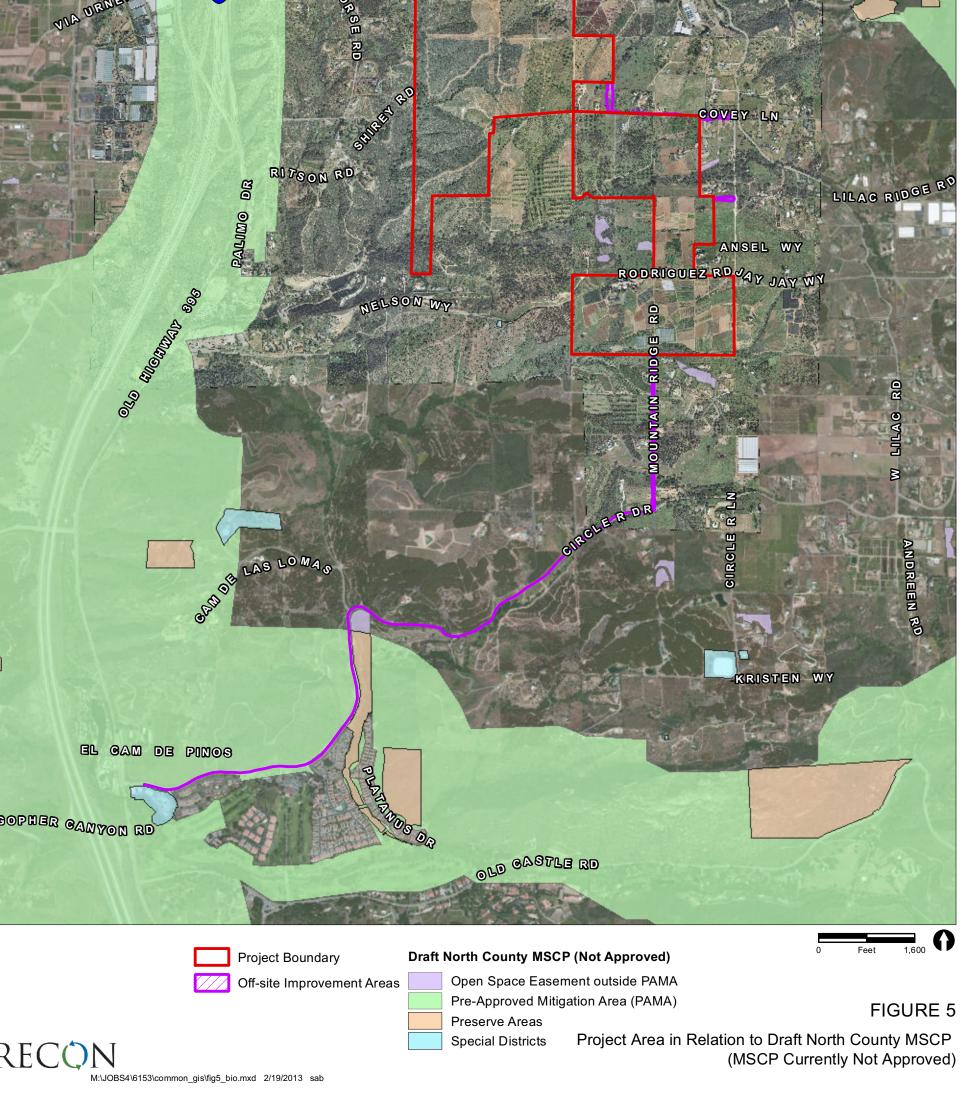
StG - Steep gullied land

VaB - Visalia sandy loam, 2 to 5% slopes

FIGURE 4

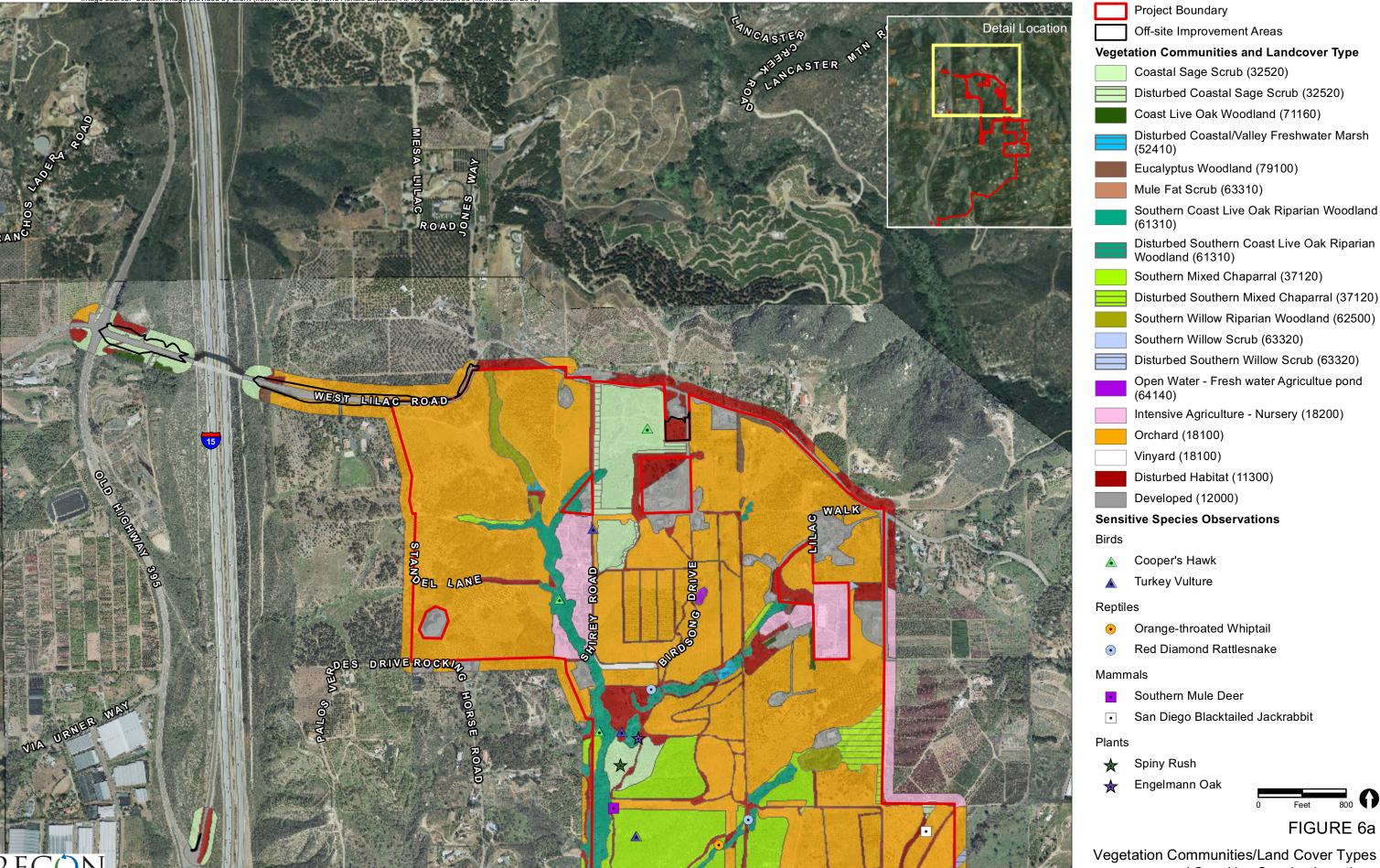


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and Sensitive Species Locations

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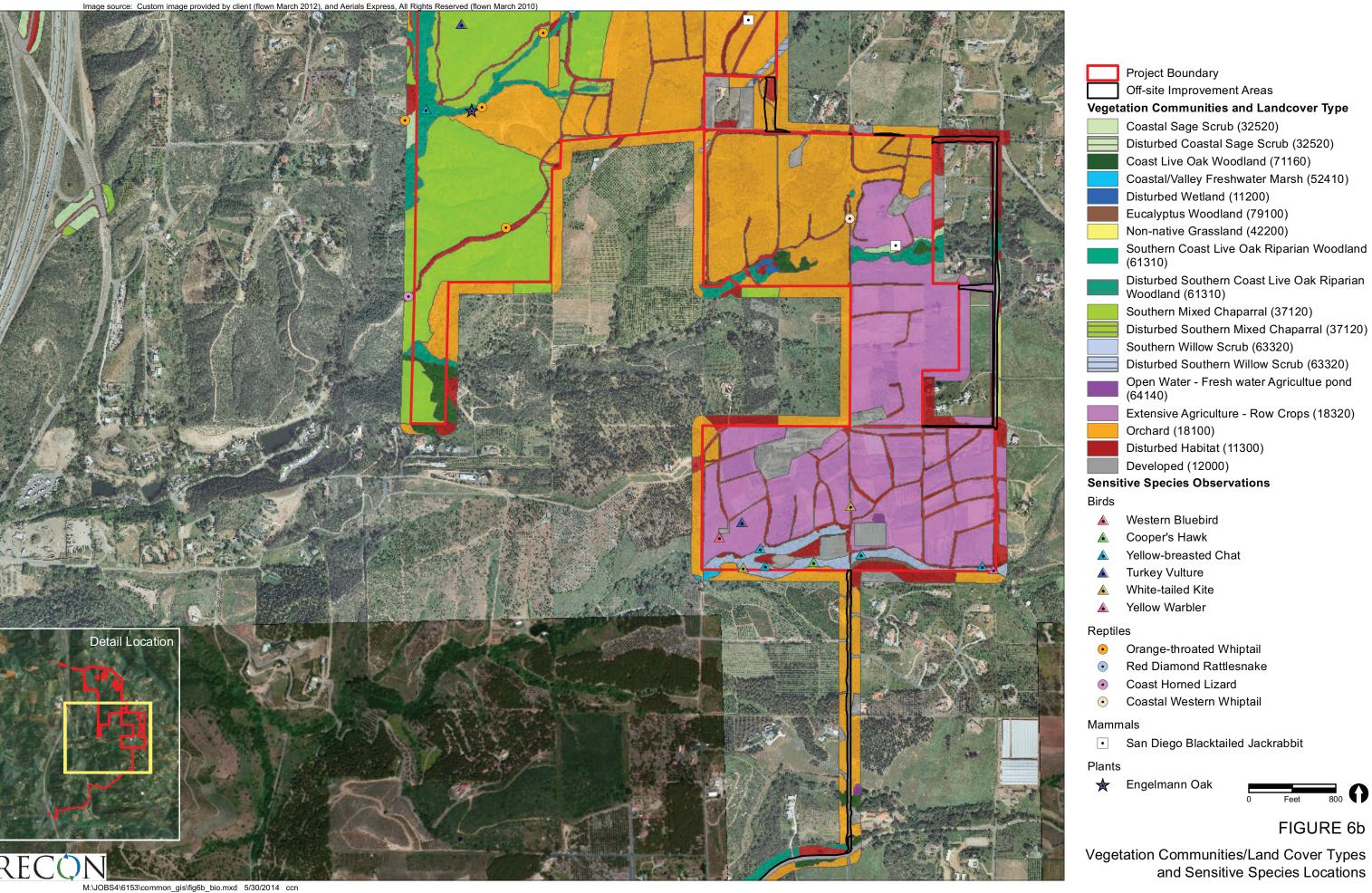
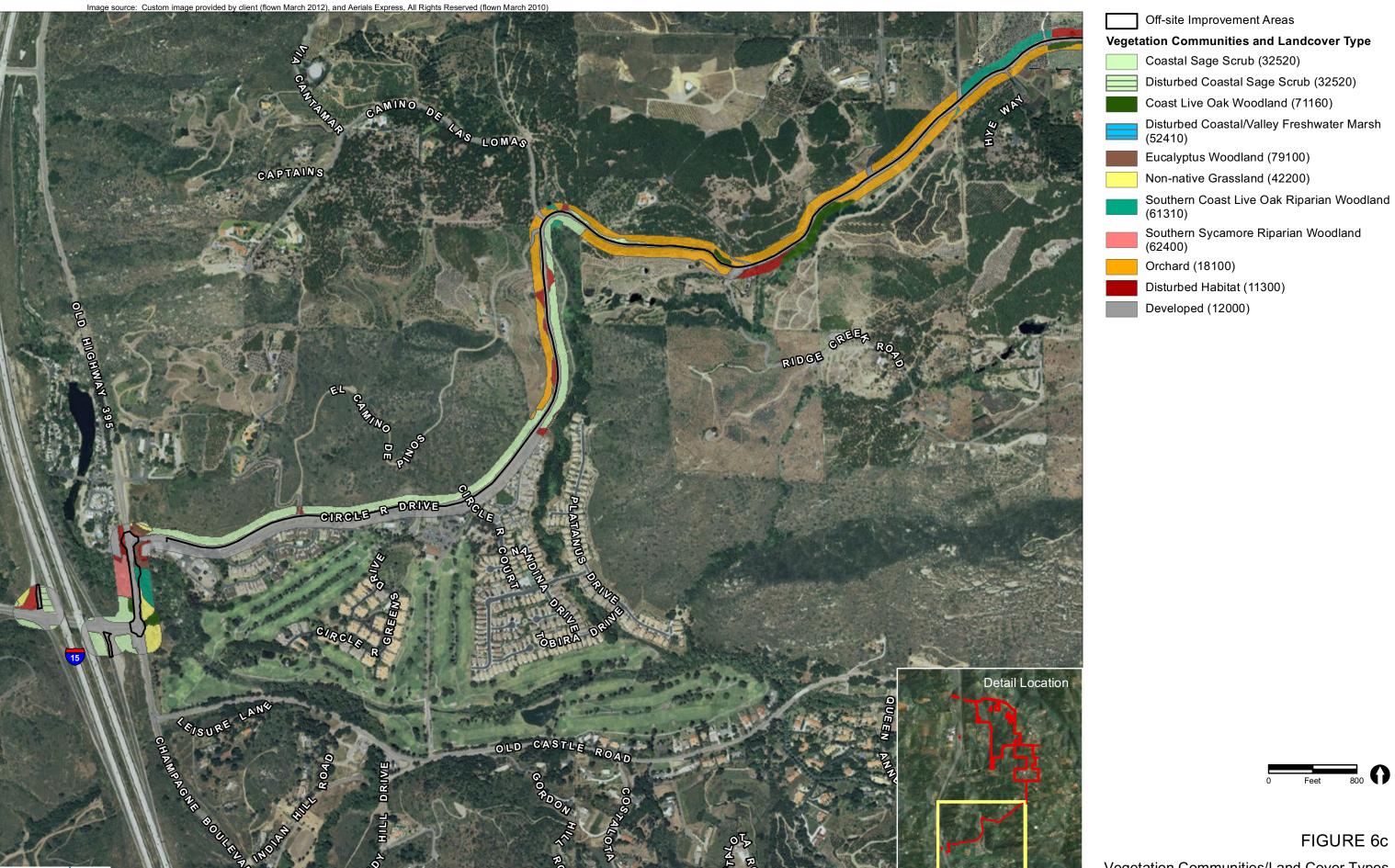


FIGURE 6b

and Sensitive Species Locations

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Vegetation Communities/Land Cover Types and Sensitive Species Locations THIS PAGE IS INTENTIONALLY BLANK.

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.

Page 24 RECON

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.

Page 26 RECON

# 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 manmade and were not considered jurisdictional wetlands. The ponds were not considered

Page 28 RECON

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 onsite 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

Page 30 RECON

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 <u>due to it being too common</u>, but is currently on List D of the County sensitive species list. <u>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 <u>relatively</u>-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.</u>

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. <u>This species is relatively abundant in the San Diego region</u>, and commonly found in the mountainous inland areas of eastern San Diego County and occasionally in other north-coastal areas (<u>Reiser 2001</u>). 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 <u>given the countywide</u> <u>abundance of this species</u>.

# 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.

<u>Coastal western</u>—whiptail (<u>Aspidoscelis tigris stejnegeri</u>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

Page 32 RECON

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.

<u>Cooper's hawk</u> (*Accipiter cooperii*) – The Cooper's hawk is considered a <del>Species of Special Concern</del> 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 <u>majusculus</u>) — 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.

<u>Turkey vulture</u> (*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 (<u>Unitt 2004</u>); therefore, the population in the vicinity of the project area does not represent a significant population of the species.

<u>Loggerhead shrike</u> (*Lanius Iudovicianus <u>grinnelli</u>*) – 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.

<u>Western bluebird</u> (*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.

<u>Yellow warbler</u> (<u>Setophaga [=Dendroica]</u> 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.

<u>Yellow-breasted chat</u> (*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.

<u>San Diego black-tailed jackrabbit</u> (*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.

<u>San Diego desert woodrat</u> (*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.

<u>Southern mule deer</u> (*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. <u>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.</u>

Page 34 RECON

#### 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 <sup>1</sup>	
Streambed	4.18
State Wetlands (Riparian habitat)	39.35
CDFG Total Jurisdiction <sup>1</sup>	43.52
County of San Diego RPO Wetlands	37.64

<sup>&</sup>lt;sup>1</sup>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*).

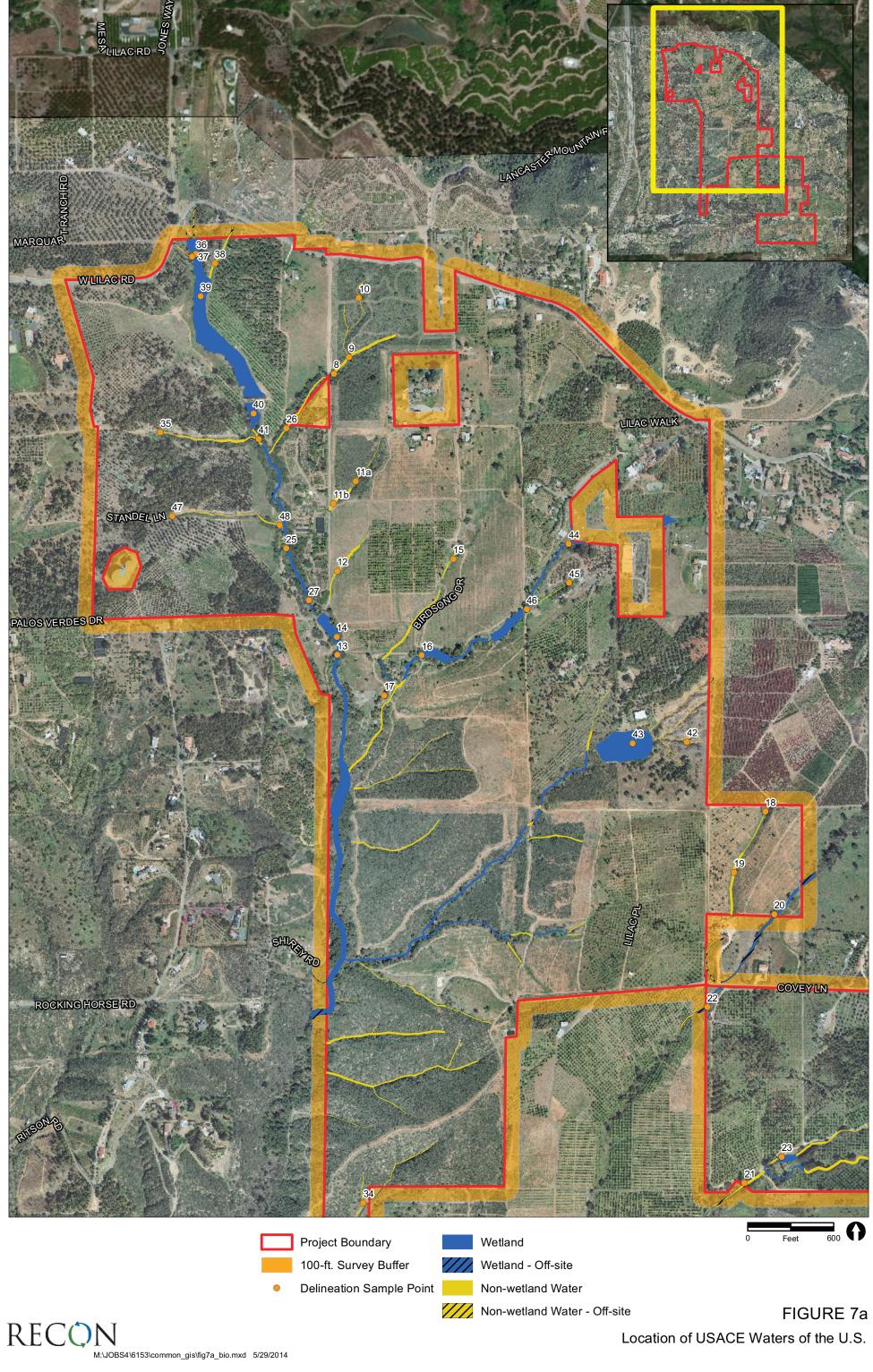
The habitat quality of the coast live oak riparian woodlands, southern willow riparian woodlands, and willow scrub habitats in the project area are generally high to moderate depending on the proximity of the wetland to agricultural activities. Canopy cover of the coast live oak woodland and willow woodland/scrub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

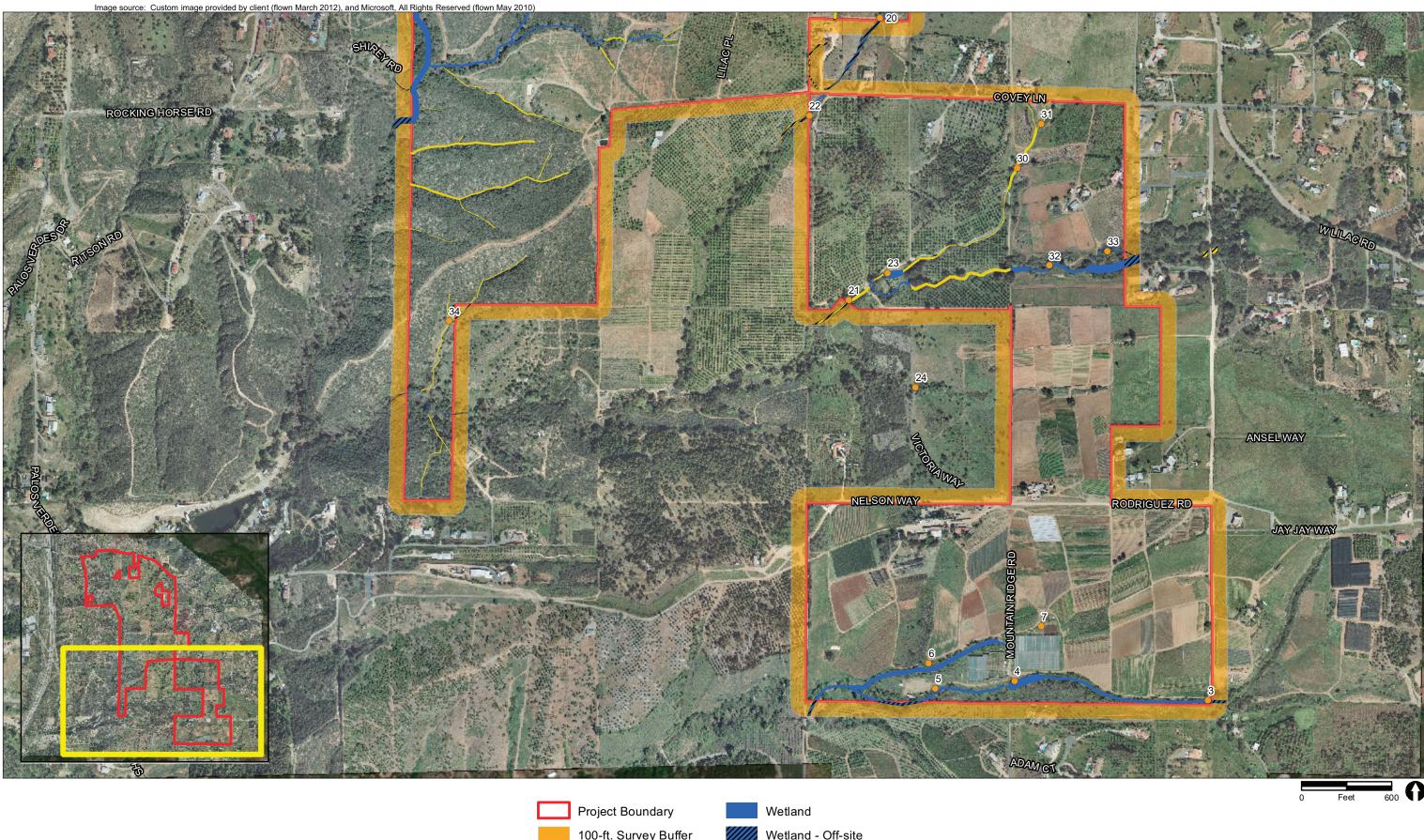
Portions of the wetlands identified in the project area are disturbed. Some wetland areas have been impacted by agricultural activities (i.e., clearing, edge effects, debris piles, etc.) that lower habitat quality. Other wetland areas have infestations of non-native species, in particular pampas grass, 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.

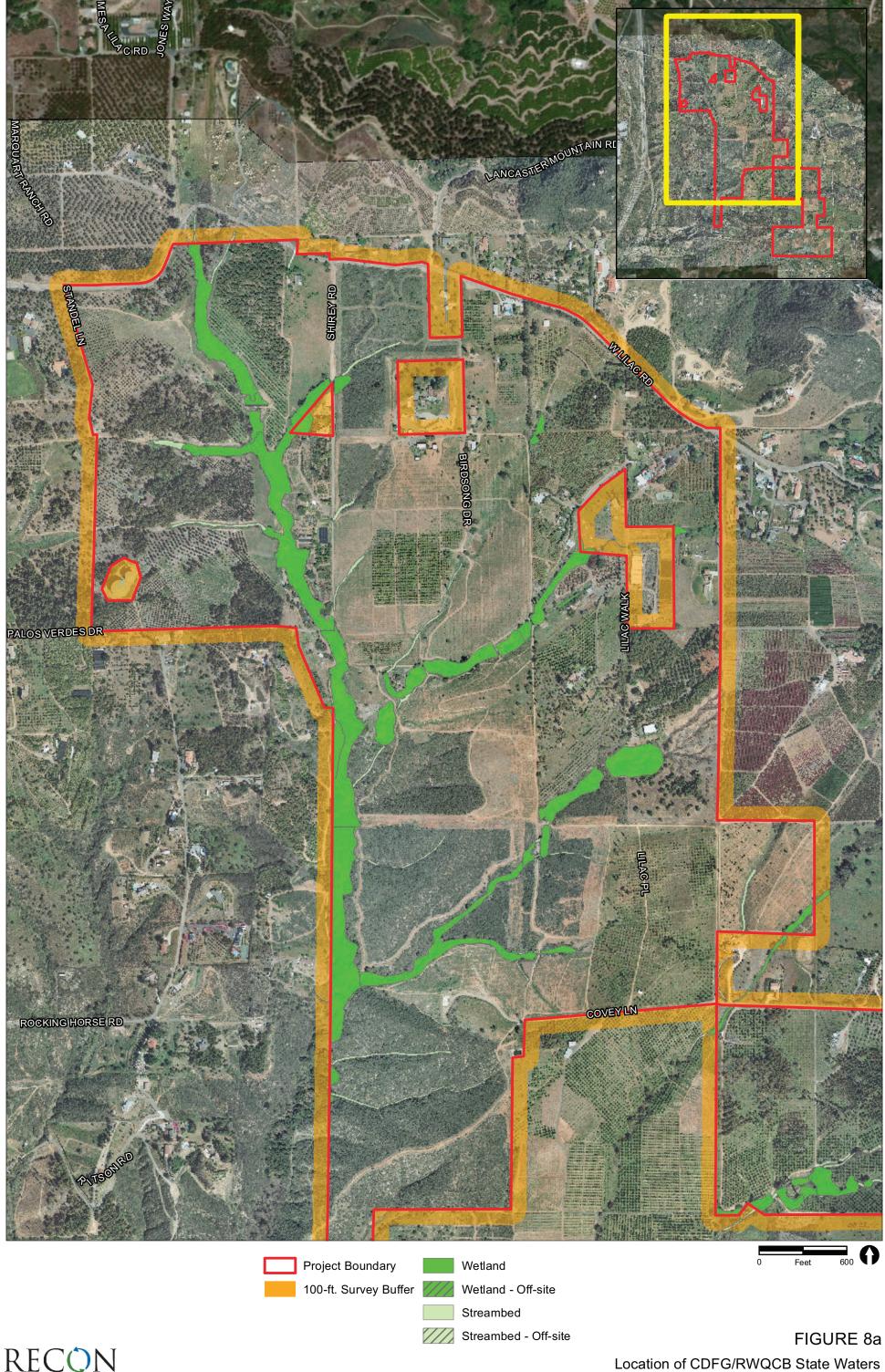
Wetland functions and values of the drainage courses in the project area are generally high in the relatively undisturbed areas and lower in disturbed wetlands or areas affected by agriculture. Downstream areas are relatively undisturbed with the exception of small developments and small agricultural 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.

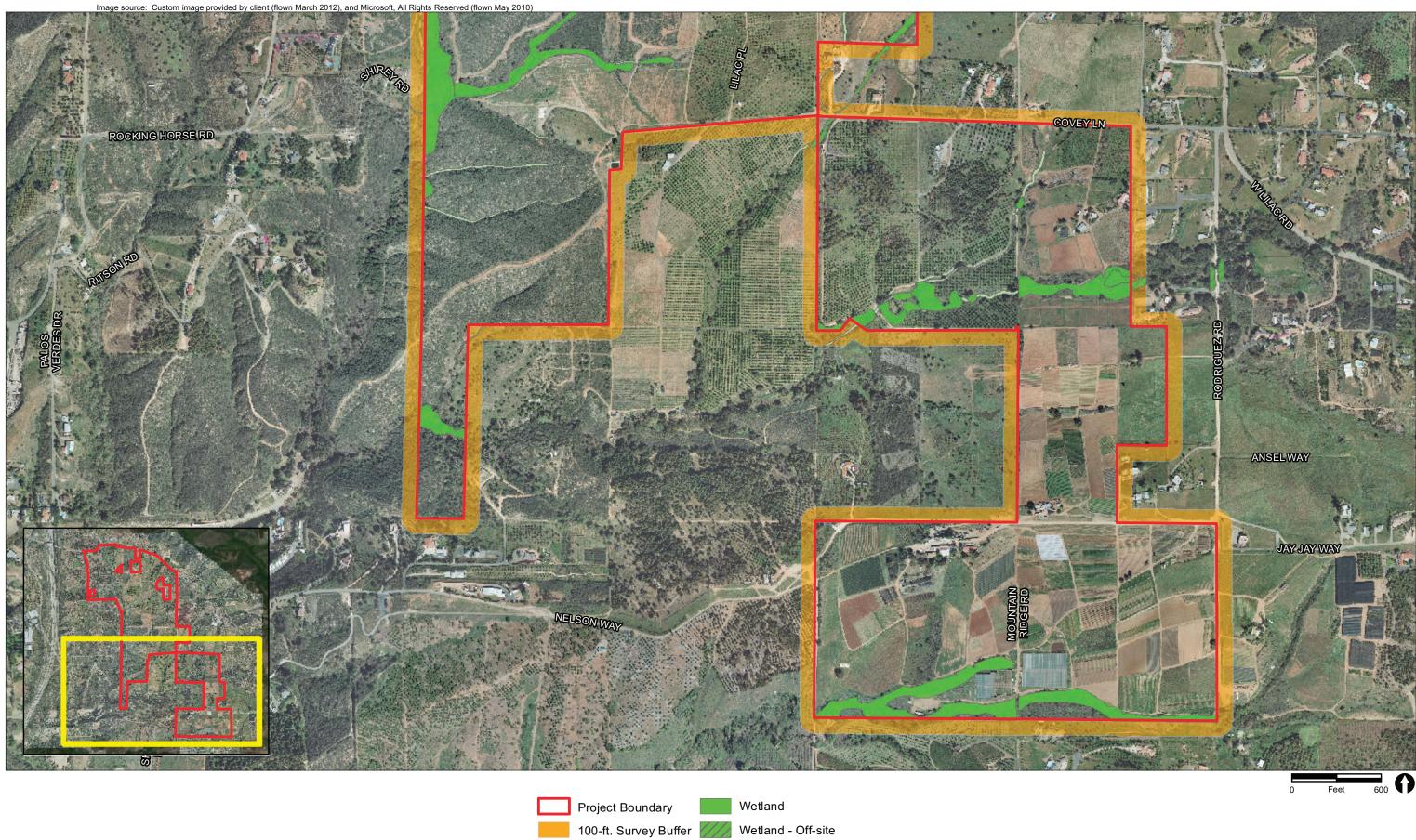
Page 36 RECON



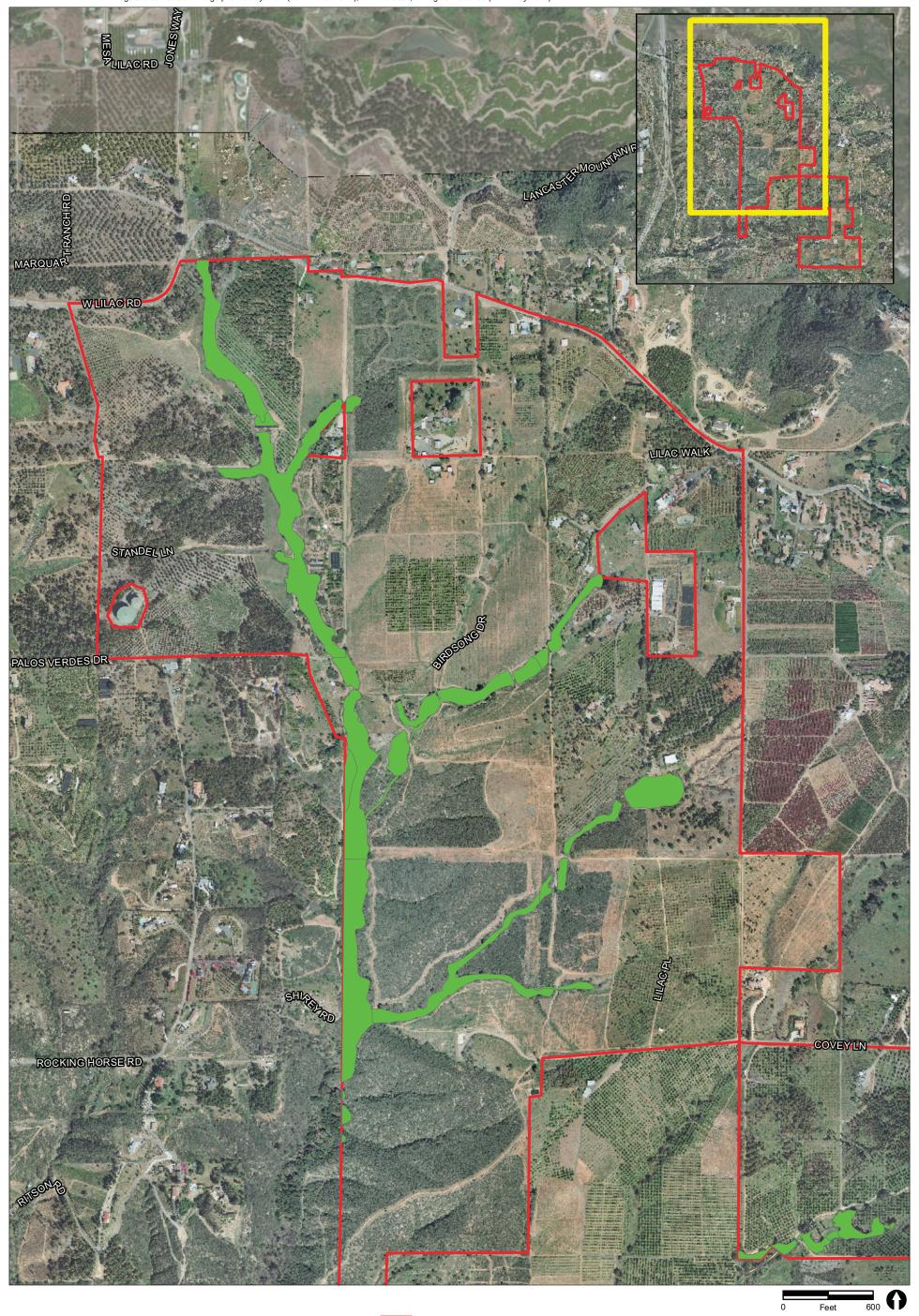








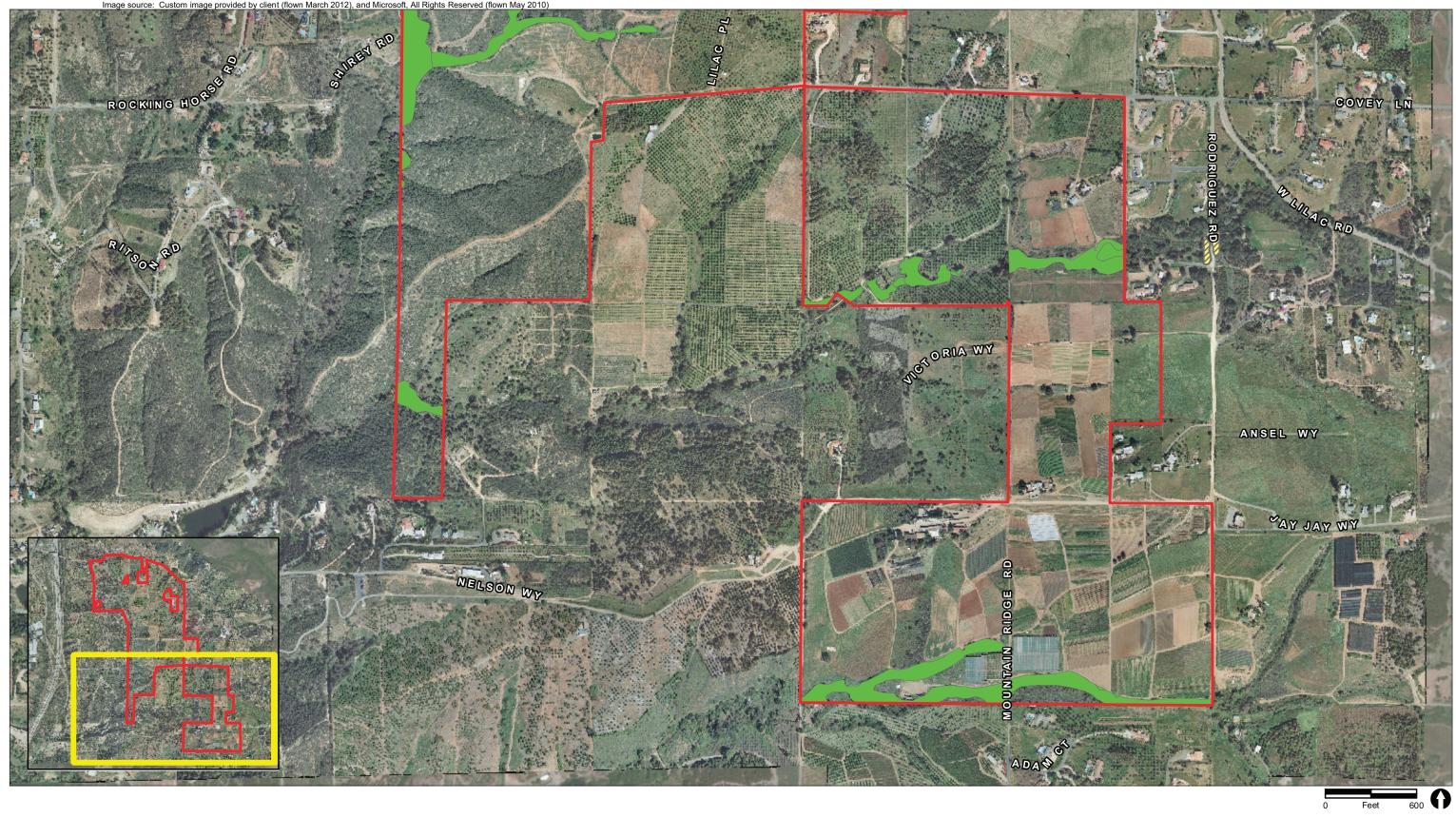




Project Boundary

County RPO Wetland

County RPO Wetland - Off-site





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 offsite 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).

Page 50 RECON

# 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."

<u>Section 404 Clean Water Act Regulations</u> – 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.

<u>Migratory Bird Treaty Act</u> – 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

<u>California Environmental Quality Act</u> – 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.

<u>California Fish and Game Code</u> – 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.

<u>California Endangered Species Act</u> – 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.

<u>Streambed Alteration Agreement Regulations</u> – 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.

<u>California Native Plant Protection Act</u> – 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.

Page 52 RECON

<u>California Oak Woodland Conservation Act</u> – 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.

<u>Multiple Species Conservation Program and Biological Mitigation Ordinance</u> – 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.

<u>Resource Protection Ordinance</u> – 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.

Page 54 RECON

# 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

			Off-site
	Existing	Impacts	Impacts
Habitat/Vegetation Community	(acres)	(acres)	(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 preconstruction 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.

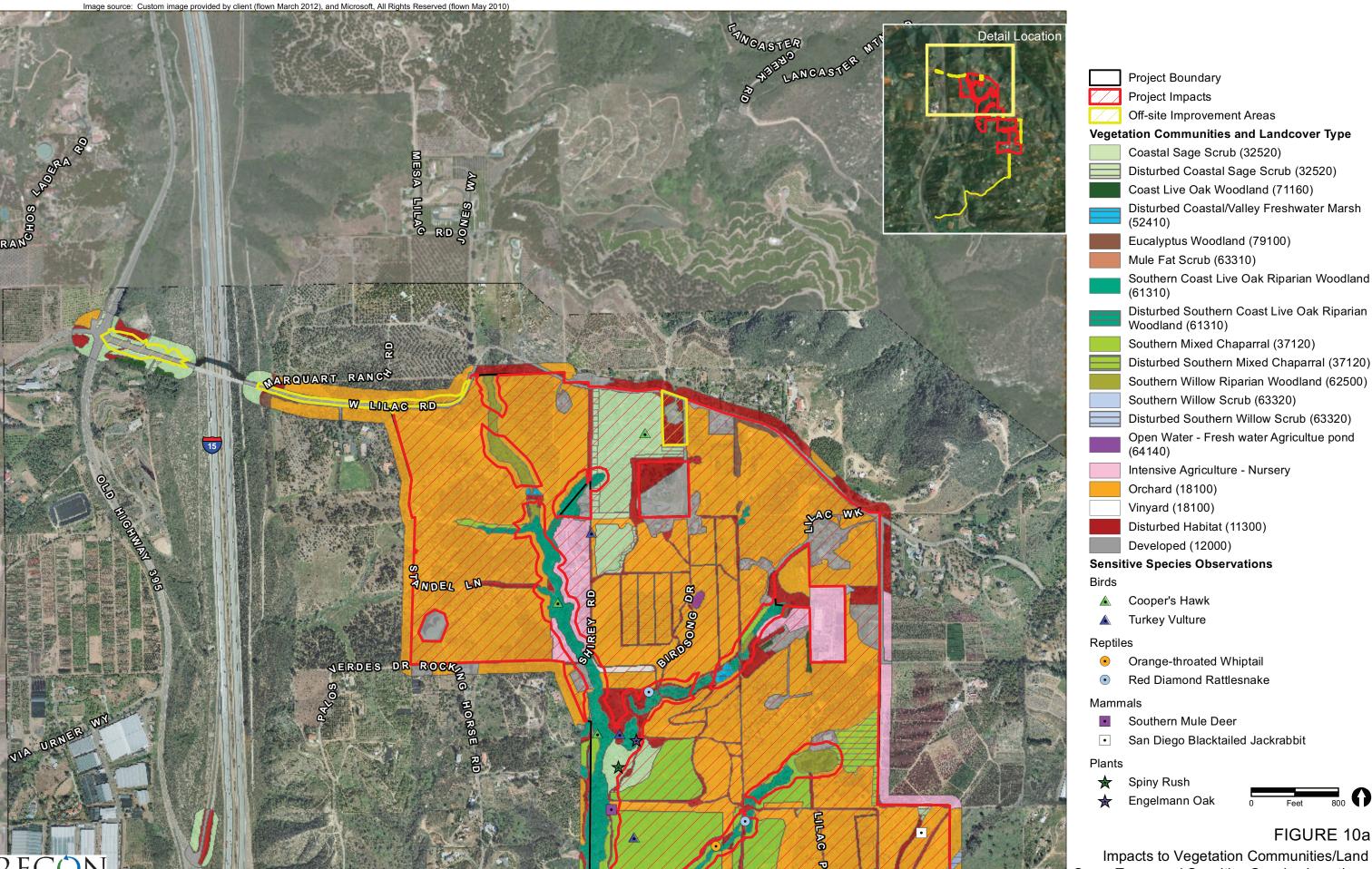
The proposed project would be constructed in five phases. Impacts to habitats and vegetation communities would occur in increments depending on the area of the particular phase of development (Table 5). The dedication of biological open space areas would also be phased (see Section 8 Summary of Project 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

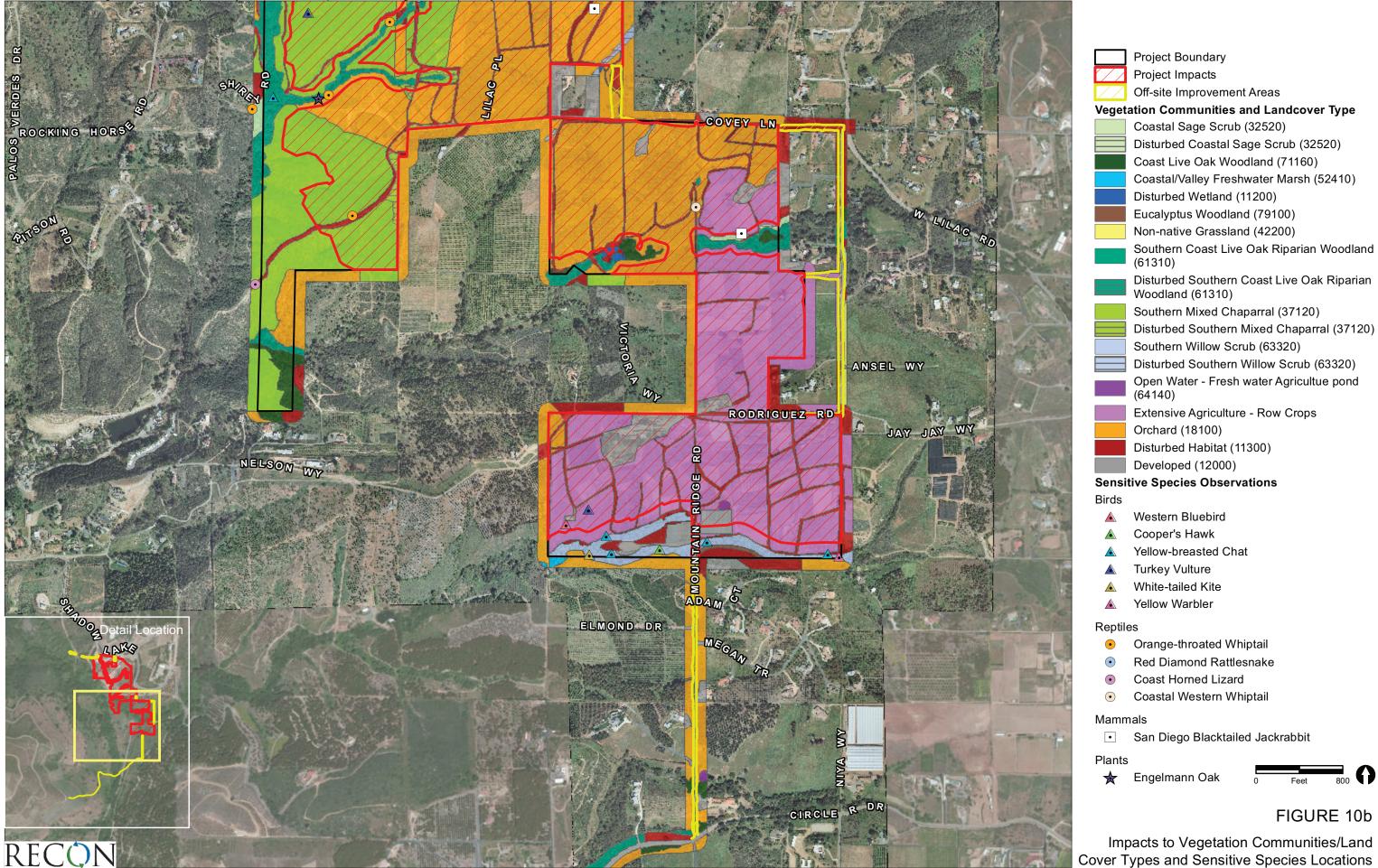
The proposed project would impact jurisdictional waters, including wetlands, across the site. Jurisdictional waters and wetlands covered under the authority of the USACE (waters of the U.S.), CDFG (waters of the state), RWQCB (waters of the state), and County of San Diego (RPO wetlands) would be impacted.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

Page 56 RECON



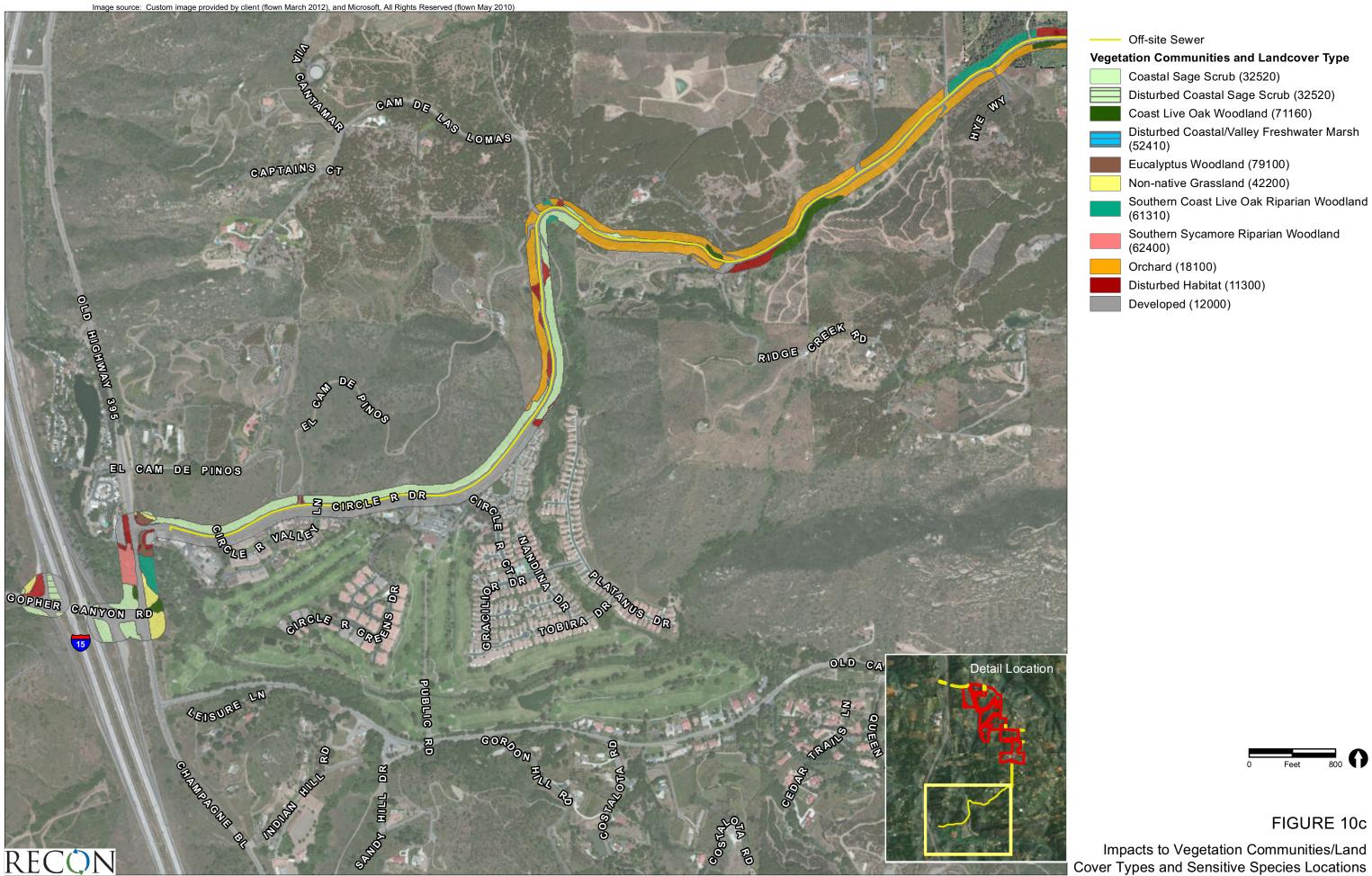
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Cover Types and Sensitive Species Locations



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Cover Types and Sensitive Species Locations



Cover Types and Sensitive Species Locations

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

Halifat Manageria Community	Existing	Phase 1 Impacts	Phase 2 Impacts	Phase 3 Impacts	Phase 4 Impacts	Phase 5 Impacts	Total Impacts
Habitat/Vegetation Community	(acres)	(acres)	(acres)	(acres)	(acres)	(acres)	(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	<del>7.4</del> 7.0	<del>77.6</del> 77.5	<del>85</del> 84.5
Intensive agriculture – nursery	9.2	1. <u>3</u> 4	<del>4.6</del> 4.7	<del>0.7</del> 0.2	0	0	<del>6.7</del> 6.2
Vineyard	0.7	0	0.6	0	0	0	0.6
Orchard	291.9	<del>87.8</del> 87.4	50.7	94.4	40.8	3.1	276. <u>4</u> 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. <u>61</u>	72.4 <u>5</u>	174. <del>9</del> 4	53.4 <u>0</u>	96. <del>1</del> 0	505. <u>0</u> 4

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

lucia di atian al Metana	Existing	Impacts	Offsite Impacts
Jurisdictional Waters	(acres)	(acres)	(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 <sup>1</sup>	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.

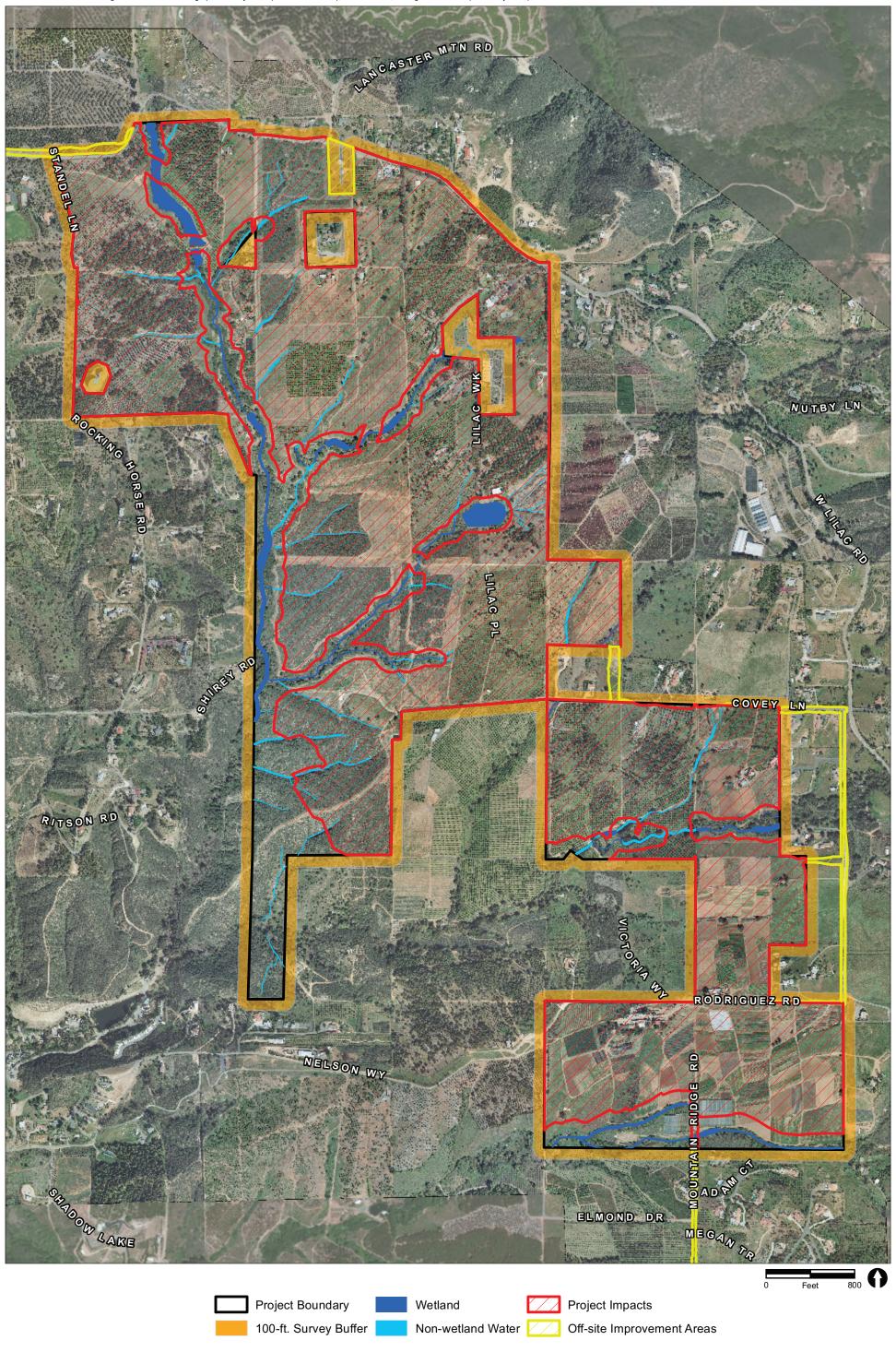
### 2.3 Impacts to Sensitive Species

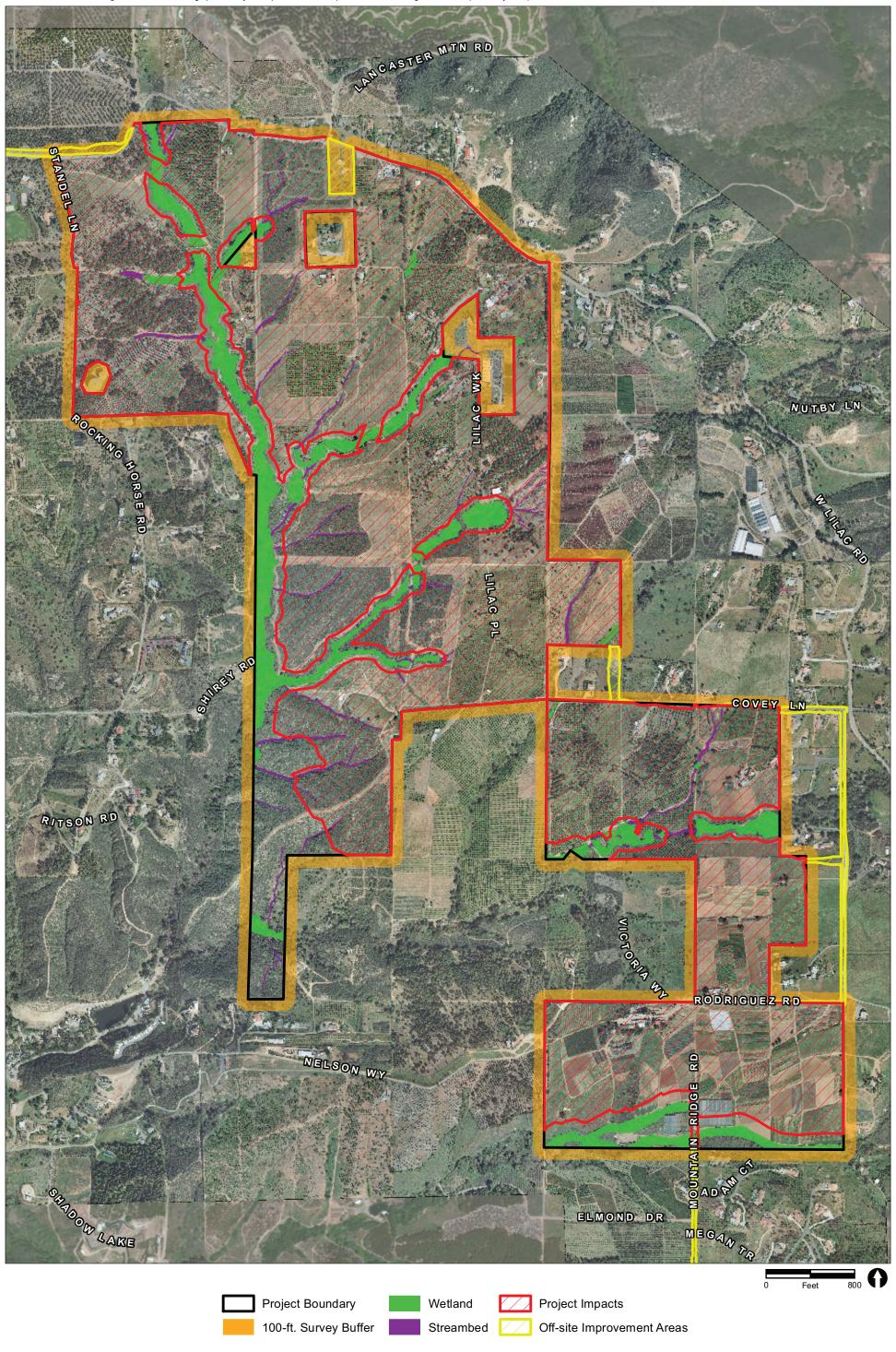
This section discusses the direct and indirect impacts the proposed project would have on sensitive species present on-site. Impacts to sensitive plants and sensitive wildlife are discussed separately below.

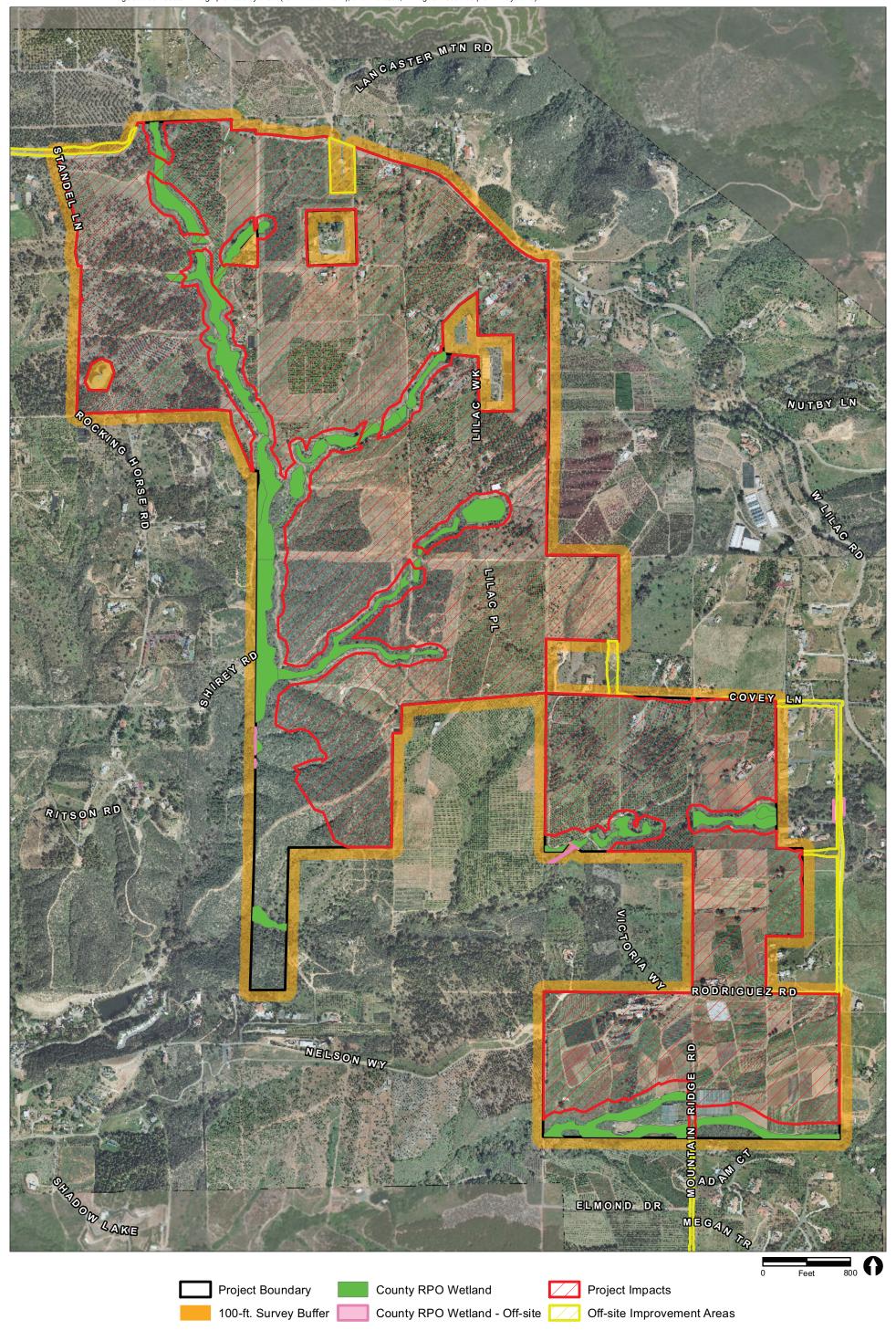
### 2.3.1 Impacts to Sensitive Plants

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.

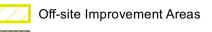
Page 64 RECON











County RPO, ACOE, CDFG Wetland - Off-site

#### 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.

Biological Resources Report for Lilac Hills Ranch

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Page 74 RECON

### 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.

<u>Coastal western-whiptail</u> – 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.

Page 76 RECON

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.

<u>Turkey vulture</u> – 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.

<u>Loggerhead shrike</u> – 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.

<u>Western bluebird</u> – 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.

<u>Yellow warbler</u> – 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

Page 78 RECON

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.

<u>Prostrate spineflower</u>: 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).

<u>Southwestern spiny rush</u>: 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.

Page 80 RECON

### 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

Page 82 RECON

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).

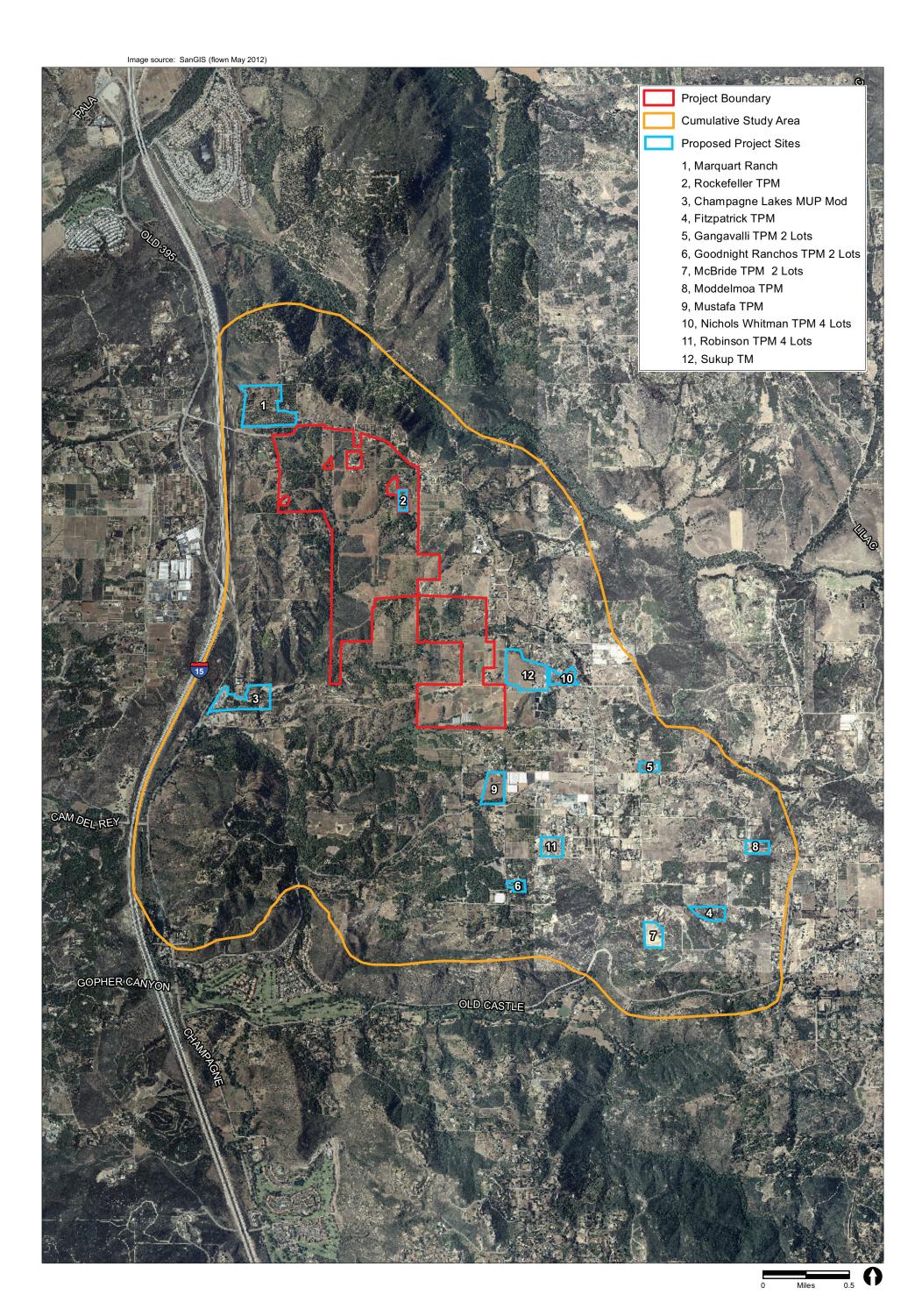
The habitats located on the cumulative project sites were determined based on the draft North County MSCP vegetation mapping (County of San Diego 2009) and aerial photographs. This determination of habitats was done to complete a qualitative cumulative analysis and no field surveys of the cumulative 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.

Page 84 RECON





### NEW TABLE 7 CUMULATIVE PROJECT LIST<sup>1</sup>

Map Key #	Project	Project Description	Project Reference Numbers	Area (acres)	Location	Habitat Types Present <sup>2</sup>	Species Potentially Present <sup>3</sup>
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		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<sup>1</sup> (continued)

Map Key #	Project	Project Description	Project Reference Numbers	Area (acres)	Location	Habitat Types Present <sup>2</sup>	Species Potentially Present <sup>3</sup>
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).		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<sup>1</sup> (continued)

Map Key #	Project	Project Description	Project Reference Numbers	Area (acres)	Location	Habitat Types Present <sup>2</sup>	Species Potentially Present <sup>3</sup>
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

<sup>&</sup>lt;sup>1</sup>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).

<sup>&</sup>lt;sup>2</sup>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.

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

Page 90 RECON

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.

Page 92 RECON

## 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

Page 94 RECON

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

Page 96 RECON

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).

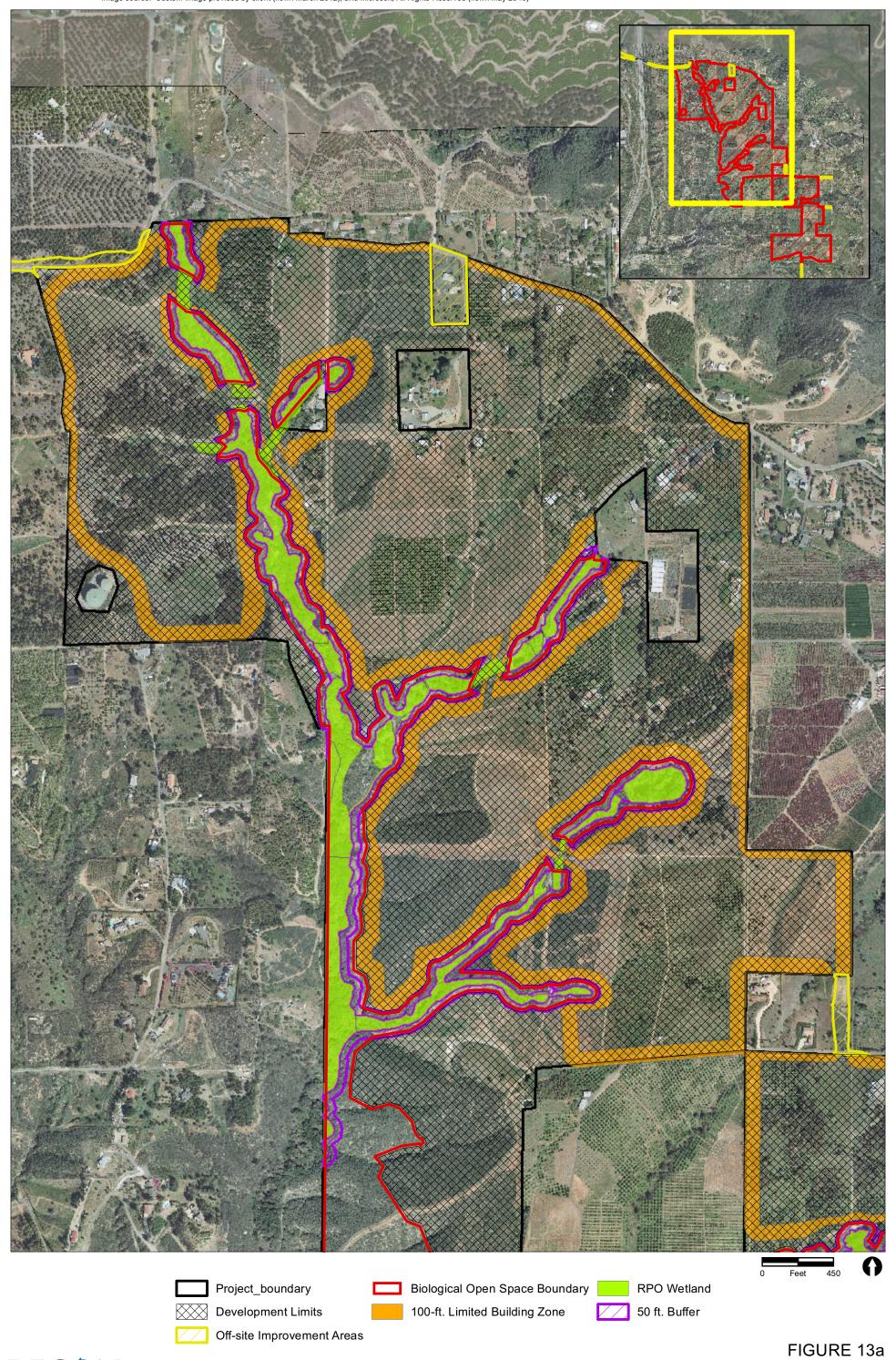
A summary of mitigation acreages for each of these options is presented in Section 8.0 of this report. Other mitigation measures would become part of project design and approvals, including restrictions on lighting, runoff, access, and noise to reduce potential indirect impacts to conserved biological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

#### 4.5 Conclusions

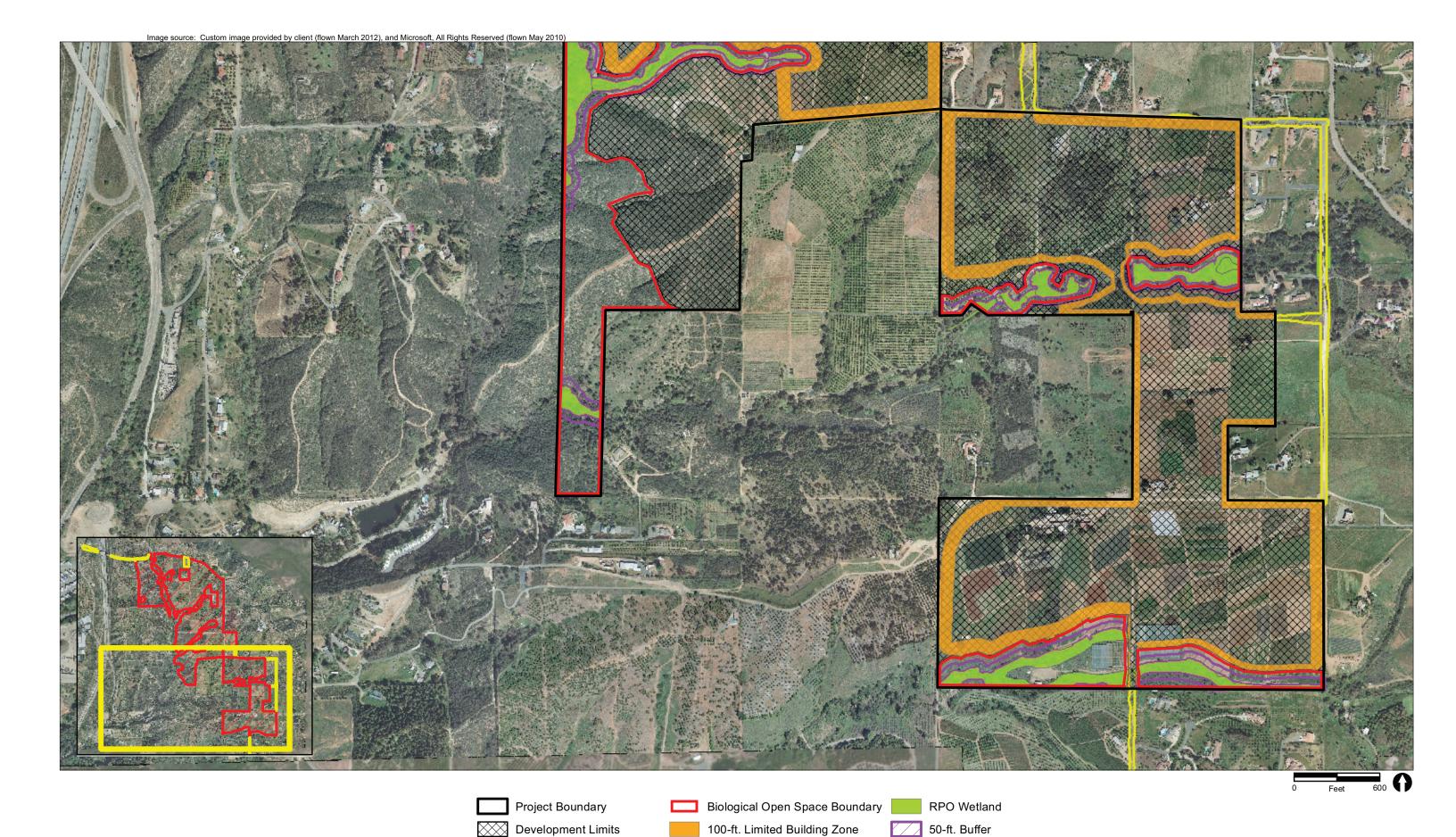
Mitigation for significant impacts to riparian and natural communities would be accomplished through a combination of off-site purchase and preservation of habitat within future PAMA lands, on-site conservation, on-site/off-site revegetation, and on-site habitat enhancement. Project design features (e.g.,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

Page 98 RECQN



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Off-site Improvement Areas



FIGURE 13b

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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

Page 104 RECON

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

<u>cumulative impacts</u>. Thus, significant cumulative impacts to jurisdictional waters would <u>be avoided</u>.

## 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.

Page 106 RECON

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.

Page 108 RECON

## 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

Page 110 RECON

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 <u>local\_cumulative study</u> area. <u>As described above in Section 3.3</u>, 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

Page 112 RECON

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 onsite 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.

Biological Resources Report for Lilac Hills Ranch

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Page 114 RECON

## 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

Page 116 RECON

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.

Page 118 RECON

### 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 parcelssites 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

<u>cumulative analysis of each policy and plan discussed in Section 7.2 is not necessary.</u> Therefore, <u>cC</u>umulative 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.

Page 120 RECON

## 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 on-site/off-site combination of wetland establishment (creation) and 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

			Off-site <sup>3</sup>		Mitigation	Preserved On-site/	Off-site
	Existing	Impacts	Impacts	Mitigation	Required	Impact Neutral	Mitigation
Habitat/Vegetation Community	(acres)	(acres)	(acres)	Ratio	(acres)	(acres)	(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 <sup>1</sup>
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 <sup>1</sup>
Disturbed southern coast live oak woodland	1.9	0.5	0	3:1	1.5	1.4	1.5 <sup>1</sup>
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 <sup>1</sup>
Southern willow scrub	6.1	0.3	0	3:1	0.9	5.8	0.9 <sup>1</sup>
Disturbed southern willow scrub	0.3	0.3	0	3:1	0.9	0	0.9 <sup>1</sup>
Mule fat scrub	0.1	0.1	0	3:1	0.3	0	0.3 <sup>1</sup>
Open water – freshwater	0.5	0.5	0	3:1	1.5	0	1.5 <sup>1</sup>
Disturbed wetland	0.4	0.1	0	3:1	0.3	0.3	0.3 <sup>1</sup>
Extensive agriculture – row crops	90.5	<u>84.5</u> 85	0	None	None	<u>6.0</u> <del>5.5</del>	None
Intensive agriculture – nursery	9.2	<u>6.2</u> 6.7	0	None	None	<u>3.0</u> <del>2.5</del>	None
Vineyard	0.7	0.6	0	None	None	0.1	None
Orchard	291.9	<u>276.4</u> 276.8	1.2	None	None	15. <u>5</u> 4	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. <u>0</u> 4	24.8		78.0	10 <u>4.1<del>2.7</del></u>	78.0 <sup>2</sup>

<sup>&</sup>lt;sup>1</sup>A portion of this mitigation acreage may be achieved on-site. Total on-site mitigation acreage not yet determined. <sup>2</sup>Total off-site mitigation requirement may be lower when on-site mitigation opportunities are fully quantified.

<sup>&</sup>lt;sup>3</sup>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.

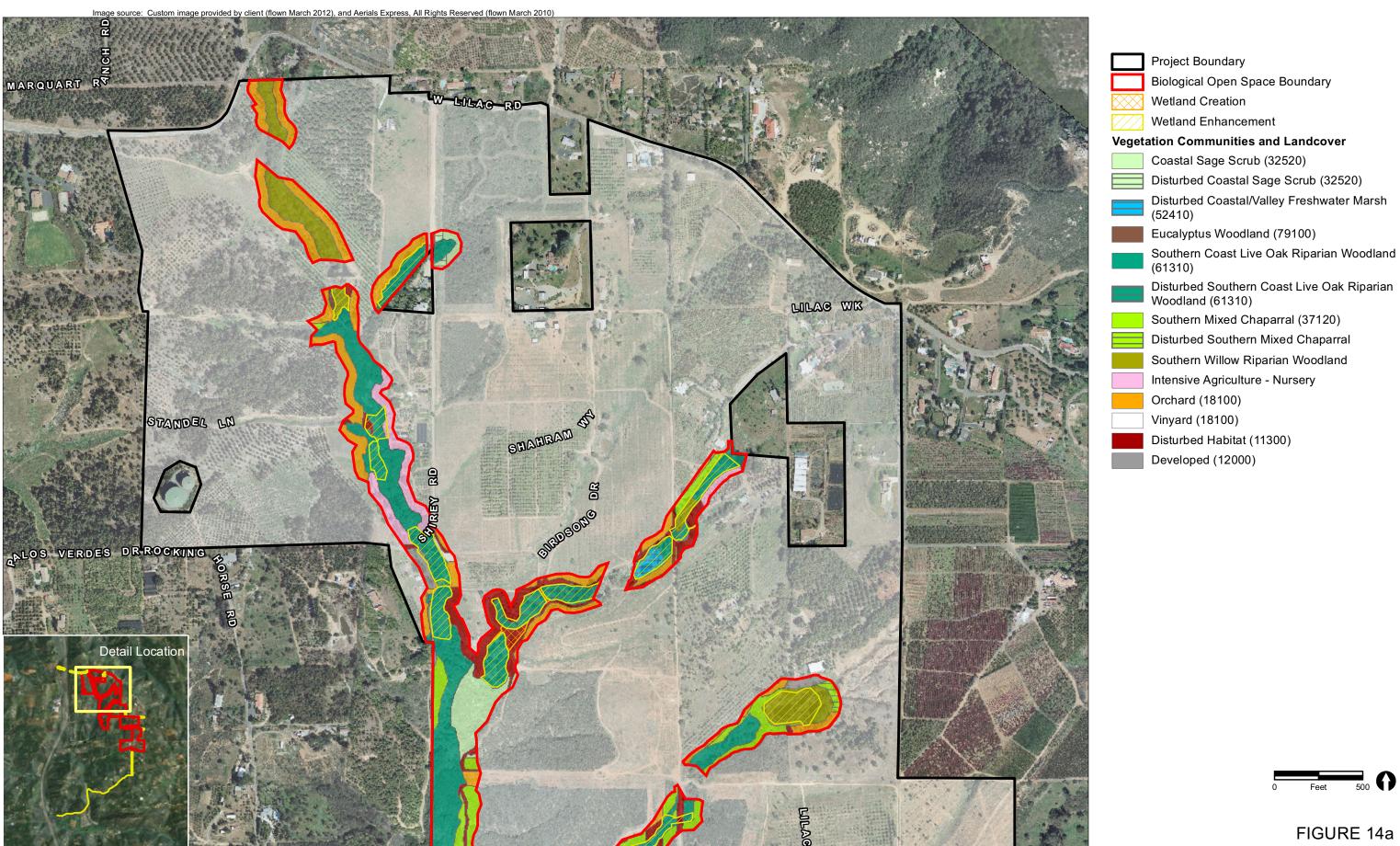
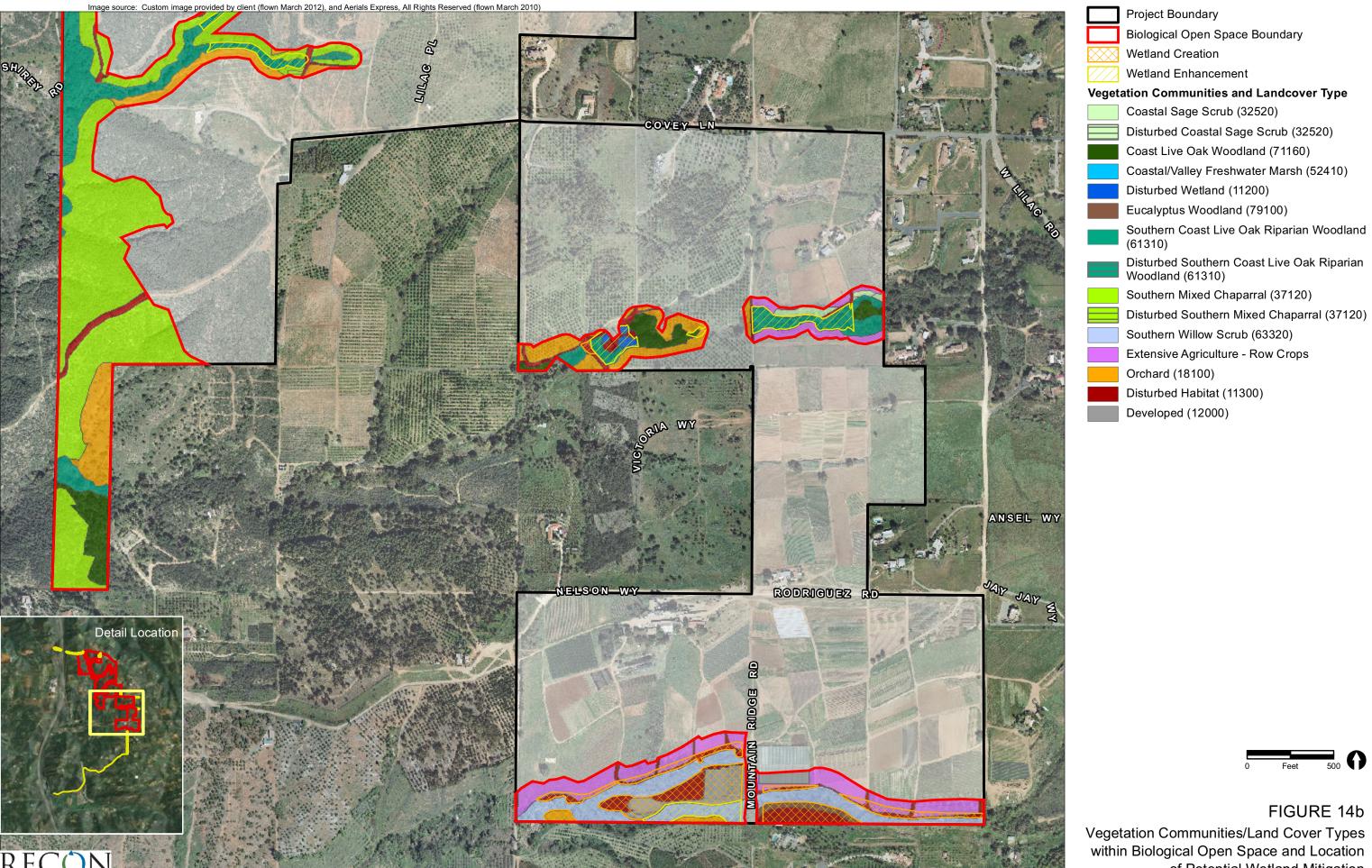


FIGURE 14a

Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation THIS PAGE IS INTENTIONALLY BLANK.



within Biological Open Space and Location of Potential Wetland Mitigation THIS PAGE IS INTENTIONALLY BLANK.

TABLE 9
SUMMARY OF MITIGATION MEASURES

	ī	_	
	Level of Significance		
Proposed Mitigation	after Mitigation	Guideline Number(s)	
Biological Open Space/Conservation	Below significant	4.2; 4.3; 4.4	
Easement of Fee Title Transfer of			
Open Space			
Off-site Purchase or Preservation of	Below significant	4.1B	
Habitat			
Preparation and Implementation of	Below significant	4.2B; 4.3; 4.5C	
Revegetation Plans			
Revegetation and/or Enhancement of	Below significant	4.2B; 4.3; 4.5C	
Open Space			
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,	Below significant	4.1H; 4.2D; 4.4D	
and/or Noise	Ğ	, ,	
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	
	<u> </u>	· · · · · · · · · · · · · · · · · · ·	

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

Development	Biological Open Space	
Phase	Area Dedication*	Acres
1	OS1	1.4
1	OS2	3.2
1	OS3	1.3
1	OS4	0. <u>7</u> 6
1	OS5	0.1
1	OS6	8. <u>9</u> 5
2	OS7	9. <u>0</u> 1
2	OS9	3.6
3	OS8	4 <u>4.2</u> 3.9
3	OS10	4. <u>8</u> 6
4	OS11	5. <u>3</u> 1
4	OS12	4. <u>3</u> 1
5	OS13	10. <u>8</u> 7
5	OS14	<u>0.3</u> 6.5
<u>5</u>	<u>OS15</u>	<u>6.2</u>
TOTAL		10 <u>4.1</u> 2.7

<sup>\*</sup>See Figure 15 for locations of biological open space areas.

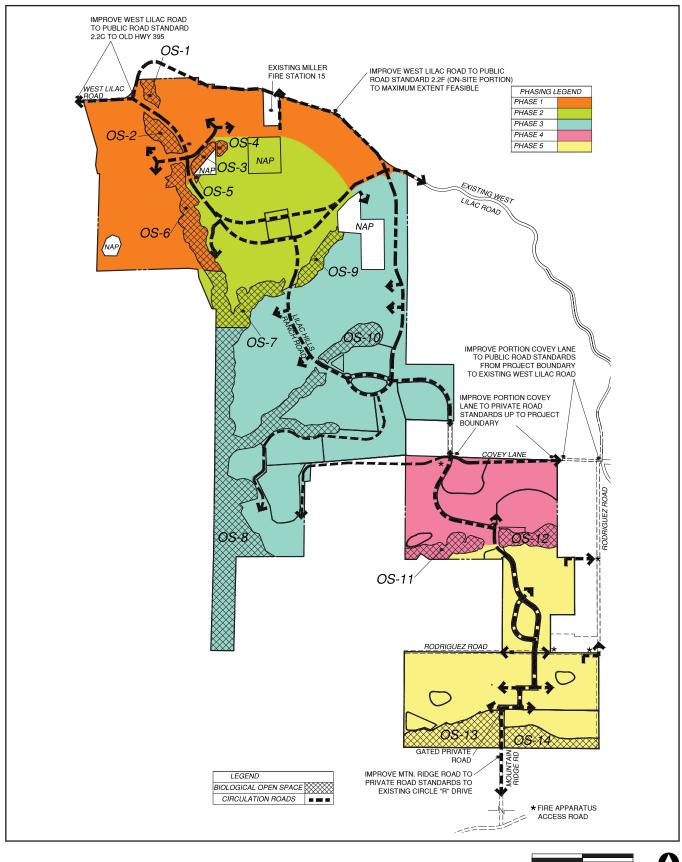






FIGURE 15 Biological Open Space Plan minimized by restrictions on construction activities during the sensitive avian breeding season or through the use of adequate noise attenuation measures. Any lighting adjacent to biological open space areas will be shielded and directed away from the habitat areas 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.

Biological Resources Report for Lilac Hills Ranch

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Page 130 RECON

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RECON Page 135

Biological Resources Report for Lilac Hills Ranch

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Page 136 RECON

# 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

RECON Page 137

Biological Resources Report for Lilac Hills Ranch

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Page 138 RECON

## **ATTACHMENTS**

### **ATTACHMENT 1**

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

1927 Fifth Avenue San Diego, CA 92101 P 619.308.9333 F 619.308.9334

525 W. Wetmore Rd., Ste 111 Tucson, AZ 85705 P 520.325.9977 F 520.293.3051 www.reconenvironmental.com

1504 West Fifth Street Austin, TX 78703 P 512.478.0858 F 512.474.1849

2027 Preisker Lane, Unit G Santa Maria, CA 93454 P 619.308.9333 F 619.308.9334



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.

DRAFT LL-32444-E

TABLE 1
SURVEY DATES, TIMES, AND WEATHER CONDITIONS

			Doginaina	Ending	Acres
Date	Survey	Personnel	Beginning Conditions	Ending Conditions	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.

Ms. Erin McCarthy Page 3 September 29, 2011

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

Sincerely,

Erin McKinney

Associate Restoration Biologist

Ein Hekunnug

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.

Ms. Erin McCarthy Page 4 September 29, 2011

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	
Fin Mckinney	
	9/29/11
Erin McKinney	Date
Permit Number TE-797665	
1. 1.1.	
Jan Johne	9/29/11
Gerry Scheid	Date
Permit Number TE-797665	

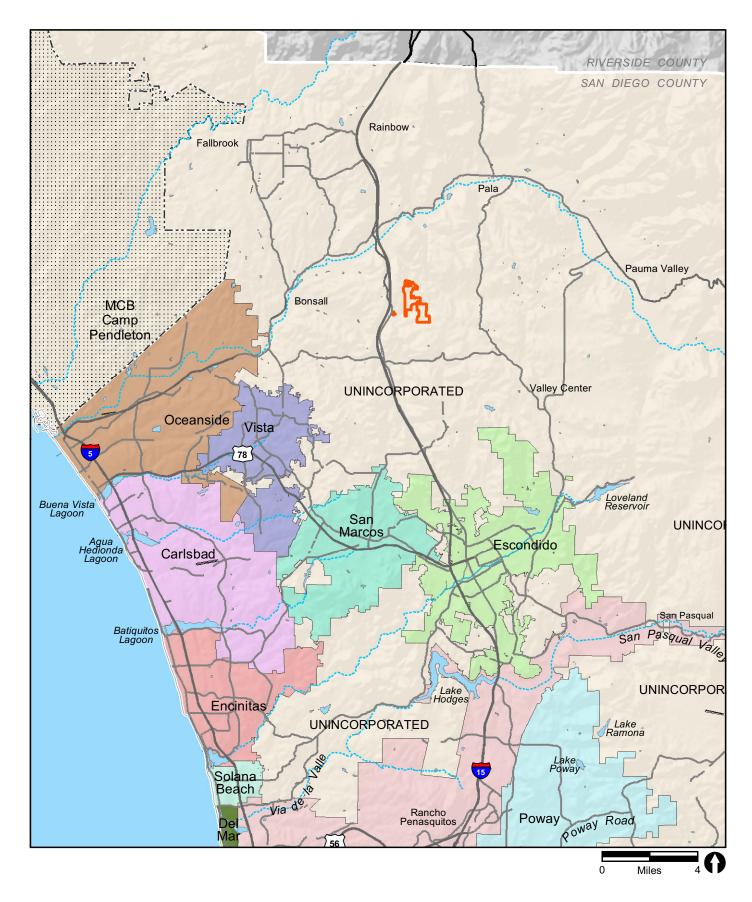






FIGURE 1
Regional Location

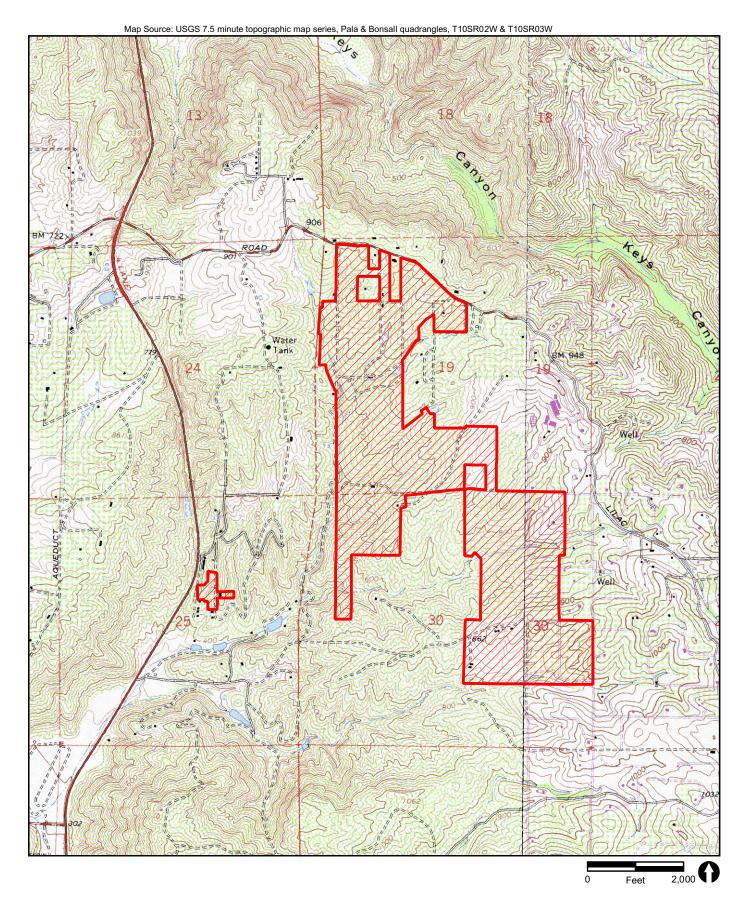
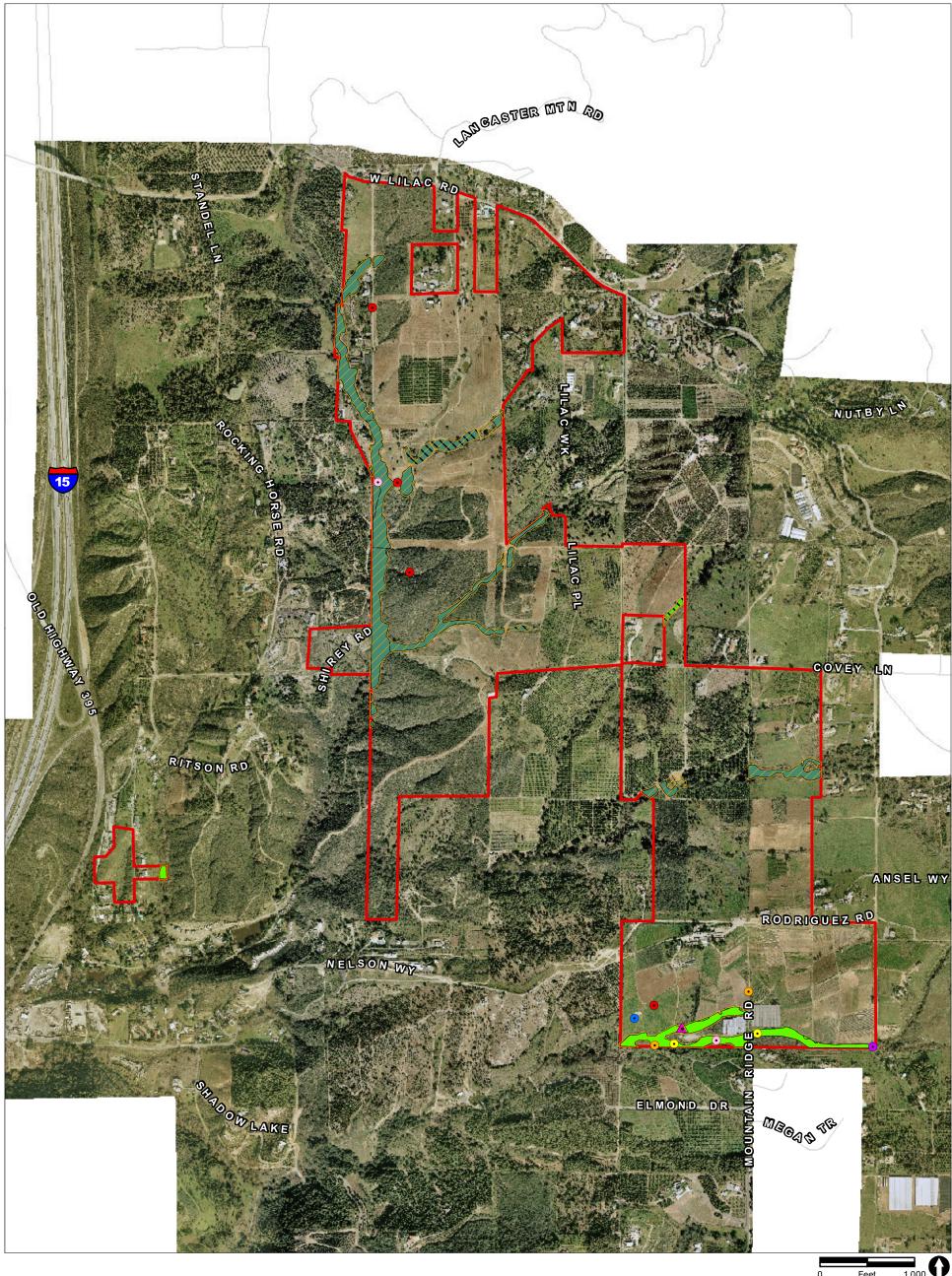
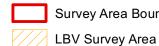






FIGURE 2
Project Location on USGS Map





Survey Area Boundary 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

Brown-headed Cowbird

**Brood Parasitic Species** 

Turkey Vulture

Western Bluebird

White-tailed Kite

Yellow-breasted Chat Yellow Warbler

FIGURE 3

Least Bell's Vireo Survey Area and Biological Resources



### **ATTACHMENT 2**

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

1927 Fifth Avenue San Diego, CA 92101 P 619.308.9333 F 619.308.9334

525 W. Wetmore Rd., Ste 111 Tucson, AZ 85705 P 520.325.9977 F 520.293.3051 www.reconenvironmental.com

1504 West Fifth Street Austin, TX 78703 P 512.478.0858 F 512.474.1849

2027 Preisker Lane, Unit G Santa Maria, CA 93454 P 619.308.9333 F 619.308.9334



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

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).

Ms. Erin McCarthy Page 2 September 28, 2011

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

<sup>°</sup>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,

Érin McKinney

Associate Restoration Biologist

Fin McKumay

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.

Ms. Erin McCarthy Page 3 September 28, 2011

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

Erin McKinney

**9/28/11** Date

Permit Number TE-797665

Fin Hekning

Unavailable for signature

9/28/11

Megan Lahti Permit Number TE-797665 Date

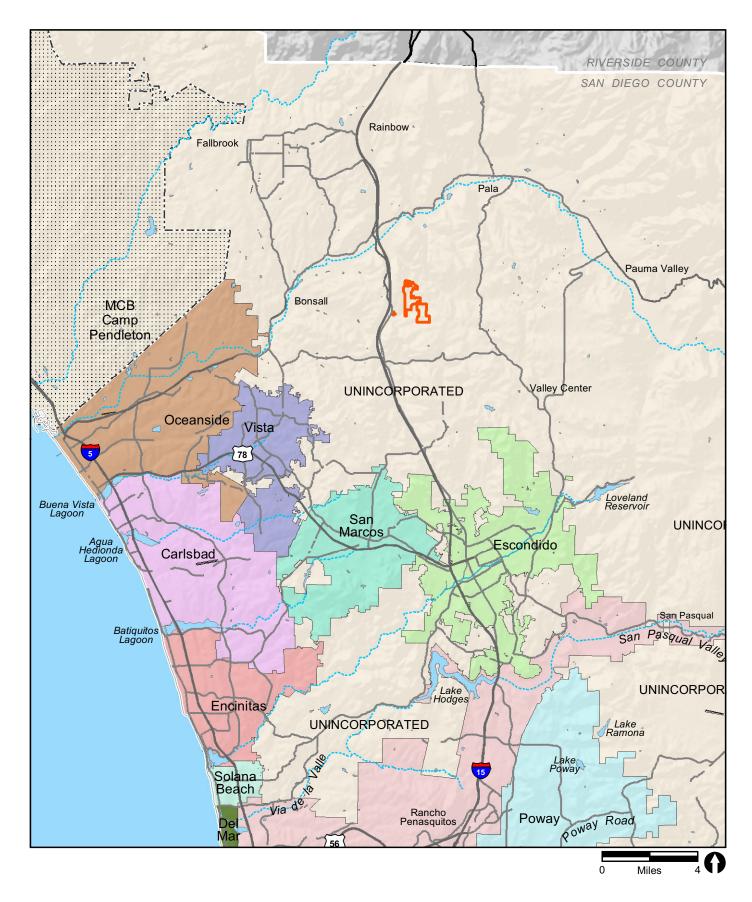






FIGURE 1
Regional Location

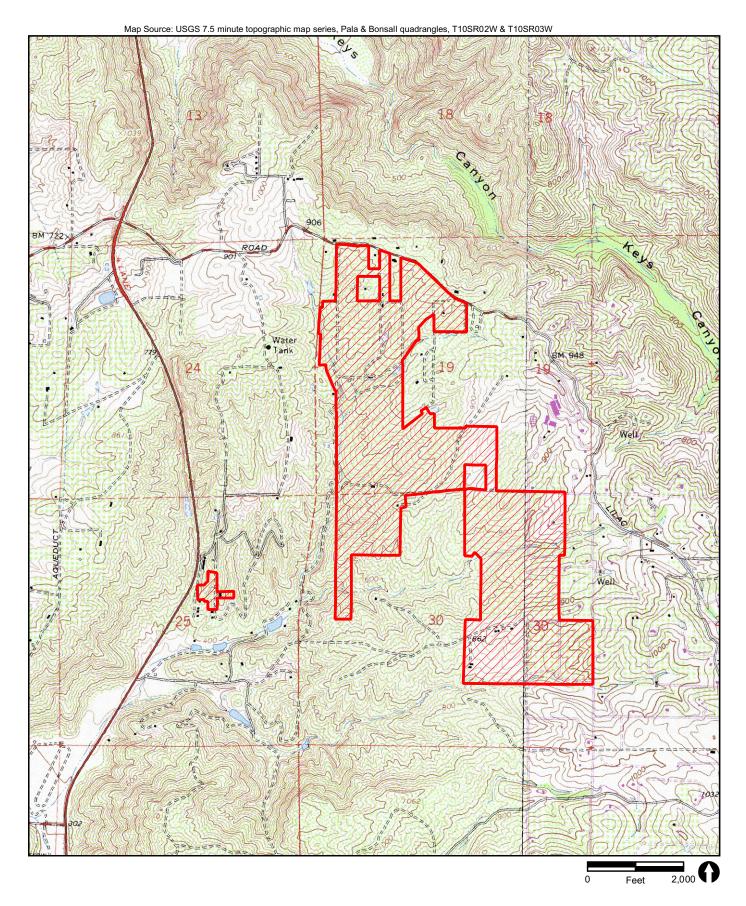
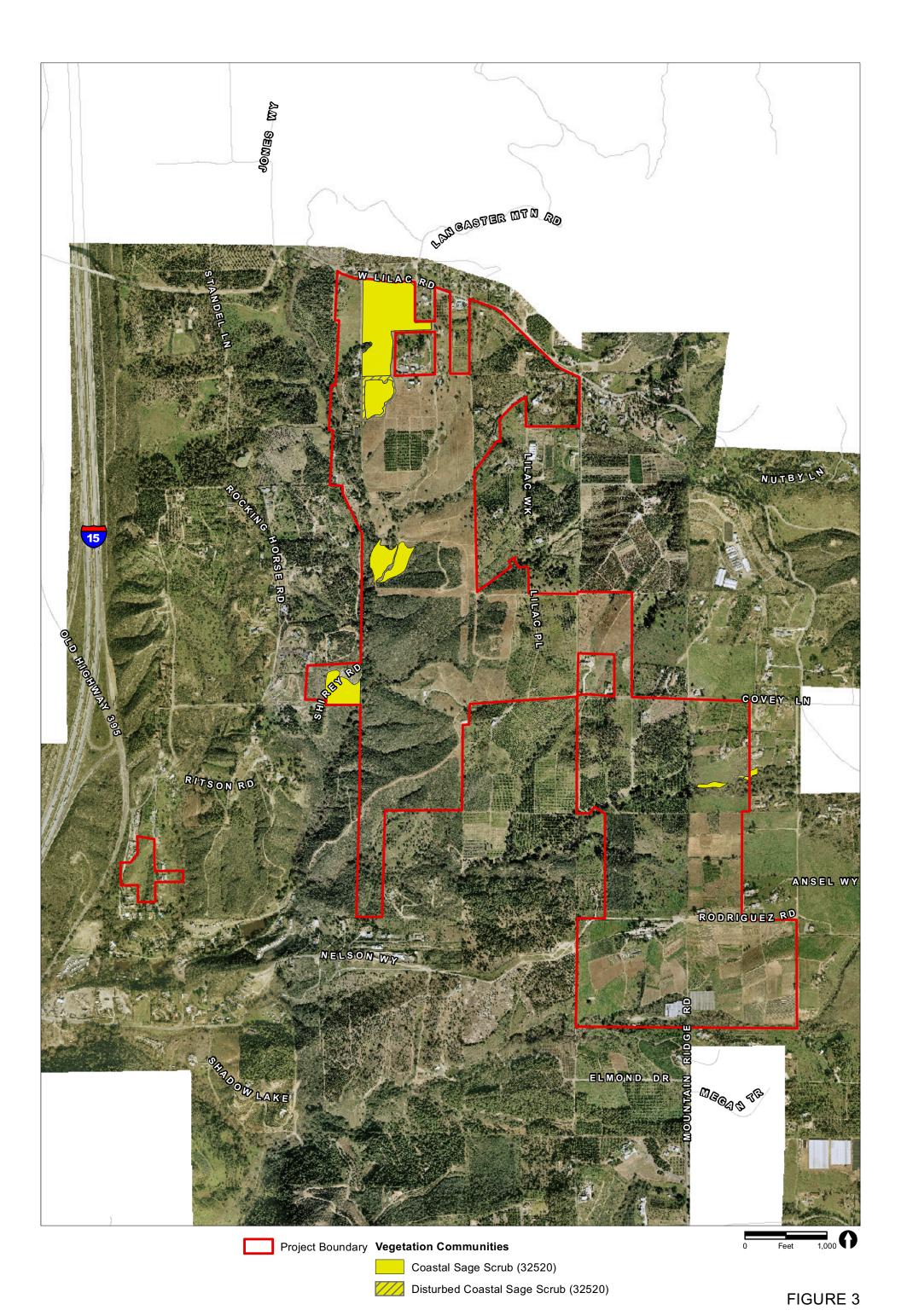






FIGURE 2
Project Location on USGS Map



### **ATTACHMENT 3**

## Southwestern Willow Flycatcher Habitat Assessment Report

1927 Fifth Avenue San Diego, CA 92101 P 619.308.9333 F 619.308.9334

2033 East Grant Road Tucson, AZ 85719 P 520.325.9977 F 520.293.3051 www.reconenvironmental.com

2027 Preisker Lane, Ste. G. Santa Maria, CA 93454 P 619.308.9333 F 619.308.9334



#### 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 – 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

Mr. Jon Rilling Page 3 August 14, 2012

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**

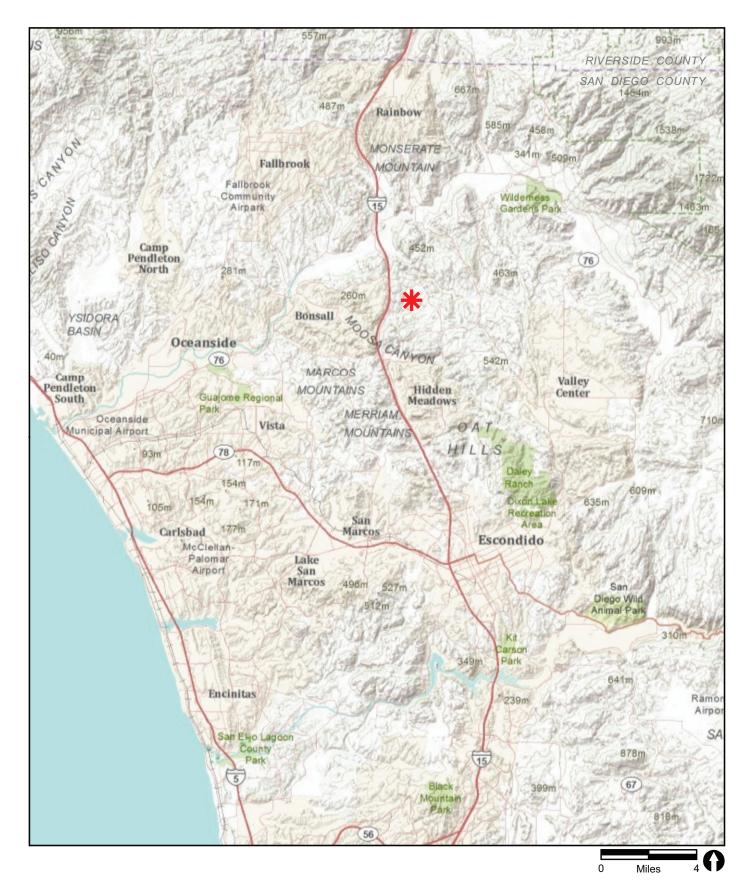
2011 Biological Resource Report for the I-15/395 Master Planned Community MAP (Case # 3992-10-025).

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

2002 Final Recovery Plan Southwestern Willow Flycatcher (*Empidonax traillii extimus*).

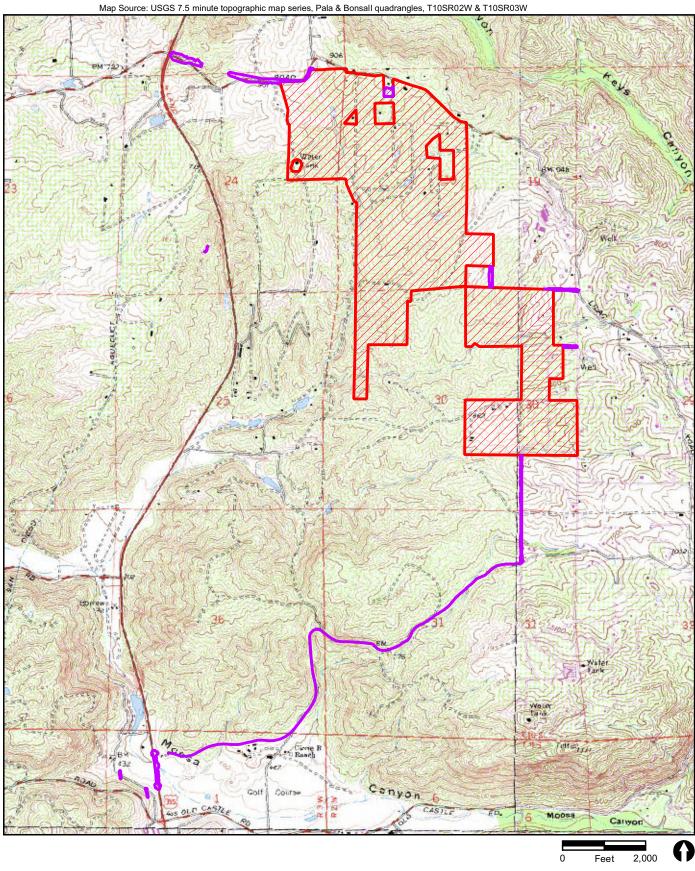
Prepared by Southwestern Willow Flycatcher Recovery Team Technical Subgroup for U.S. Fish and Wildlife Service, Region 2. August 2.

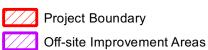
2011 Endangered and Threatened Wildlife and Plants; Designation of Revised Critical Habitat for Southwestern Willow Flycatcher. Federal Register 76:157:50542-50629.

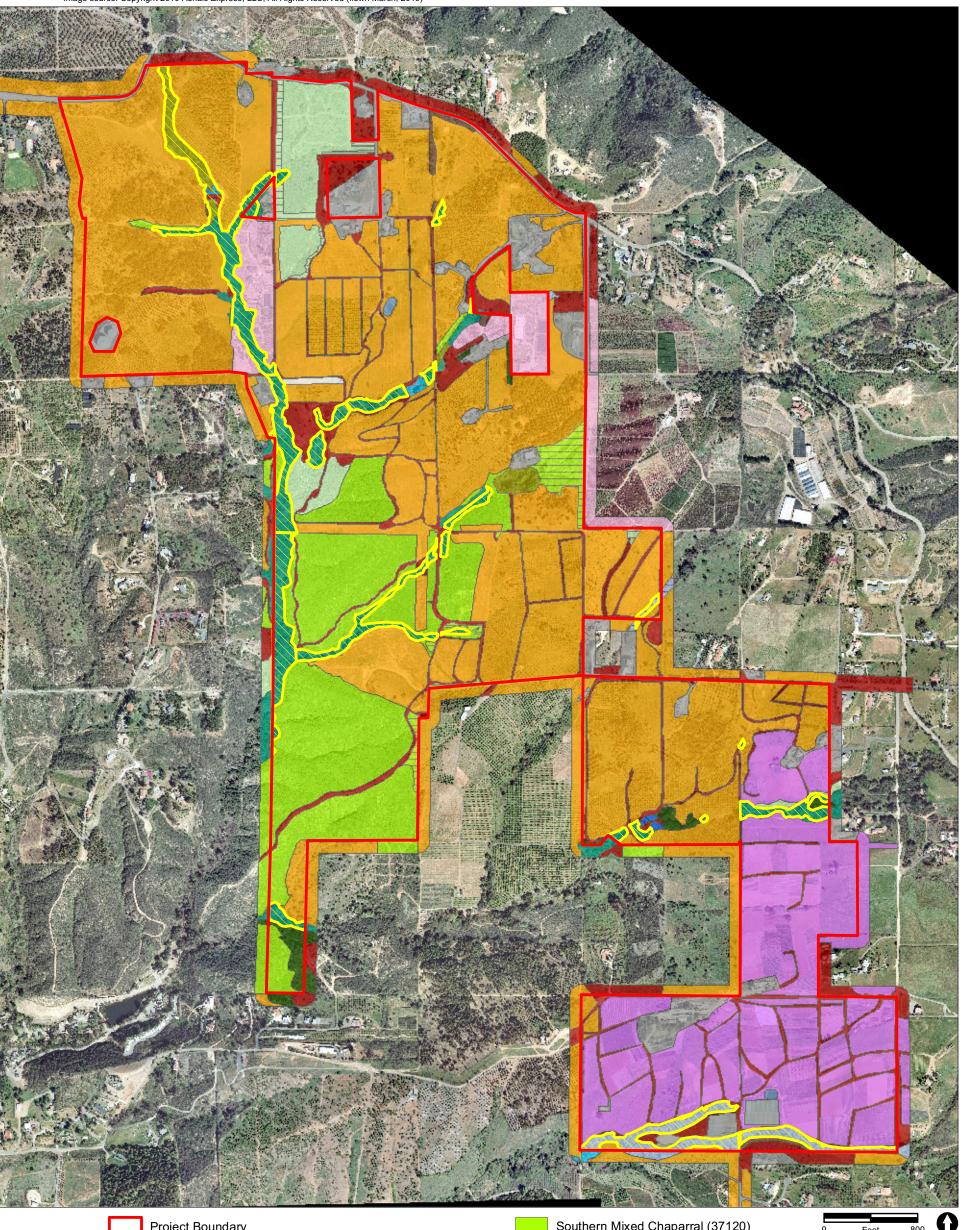












**Project Boundary** Southern Mixed Chaparral (37120) Disturbed Southern Mixed Chaparral (37120) Willow Flycatcher Habitat Assessment Areas **Vegetation Communities and Landcover Type** Southern Willow Riparian Woodland (62500) Coastal Sage Scrub (32520) Southern Willow Scrub (63320) Disturbed Coastal Sage Scrub (32520) Disturbed Southern Willow Scrub (63320) Coast Live Oak Woodland (71160) Open Water - Fresh Water Agriculture Pond (64140) Coastal/Valley Freshwater Marsh (52410) Extensive Agriculture - Row Crops (18320) Disturbed Coastal/Valley Freshwater Marsh (52410) Intensive Agriculture - Nursery (18200) Disturbed Wetland (11200) Orchard (18100) Eucalyptus Woodland (79100) Vinyard (18100) Mule Fat Scrub (63310) Disturbed Habitat (11300) Southern Coast Live Oak Riparian Woodland (61310) Developed (12000) Disturbed Southern Coast Live Oak Riparian Woodland (61310)

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

FIGURE 3

# ATTACHMENT 4 Burrowing Owl Habitat Assessment Report

1927 Fifth Avenue San Diego, CA 92101 P 619.308.9333 F 619.308.9334

2033 East Grant Road Tucson, AZ 85719 P 520.325.9977 F 520.293.3051 www.reconenvironmental.com

2027 Preisker Lane. Ste. G Santa Maria, CA 93454 P 619.308.9333 F 619.308.9334



#### 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 - 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

<sup>°</sup> F = degrees Fahrenheit

<sup>\*</sup>EJM = Erin McKinney; GAS = Gerry Scheid; JCL = John Lovio; ML = Megan Lahti

Mr. Jon Rilling Page 3 August 14, 2012

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

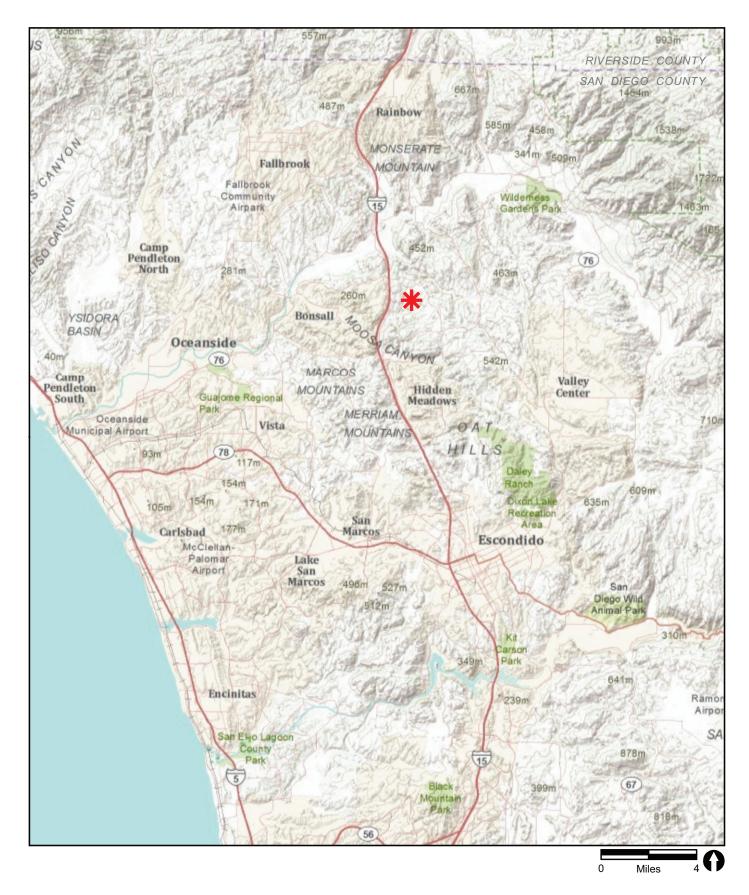
2007 California Natural Diversity Database: Electronic Database with Annual Updates. Wildlife & Habitat Data Analysis Branch, Department of Fish and Game.

Bartok, N. D., and C. J. Conway

Factors Affecting the Presence of Nesting Burrowing Owls in an Agricultural Landscape. Journal of Raptor Research 44(4):286-293.

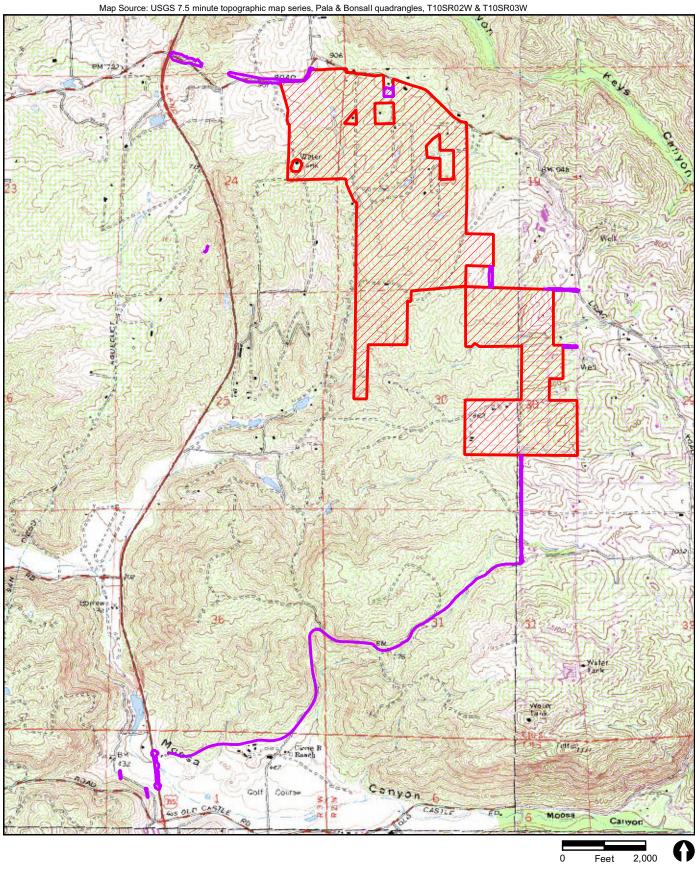
Shuford, W. D. and T. Gardali, editors

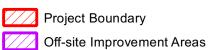
2008 California Birds Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California. Studies of Western Birds I. Species Accounts: Burrowing Owl (Athene cunicularia). 1:218-226.

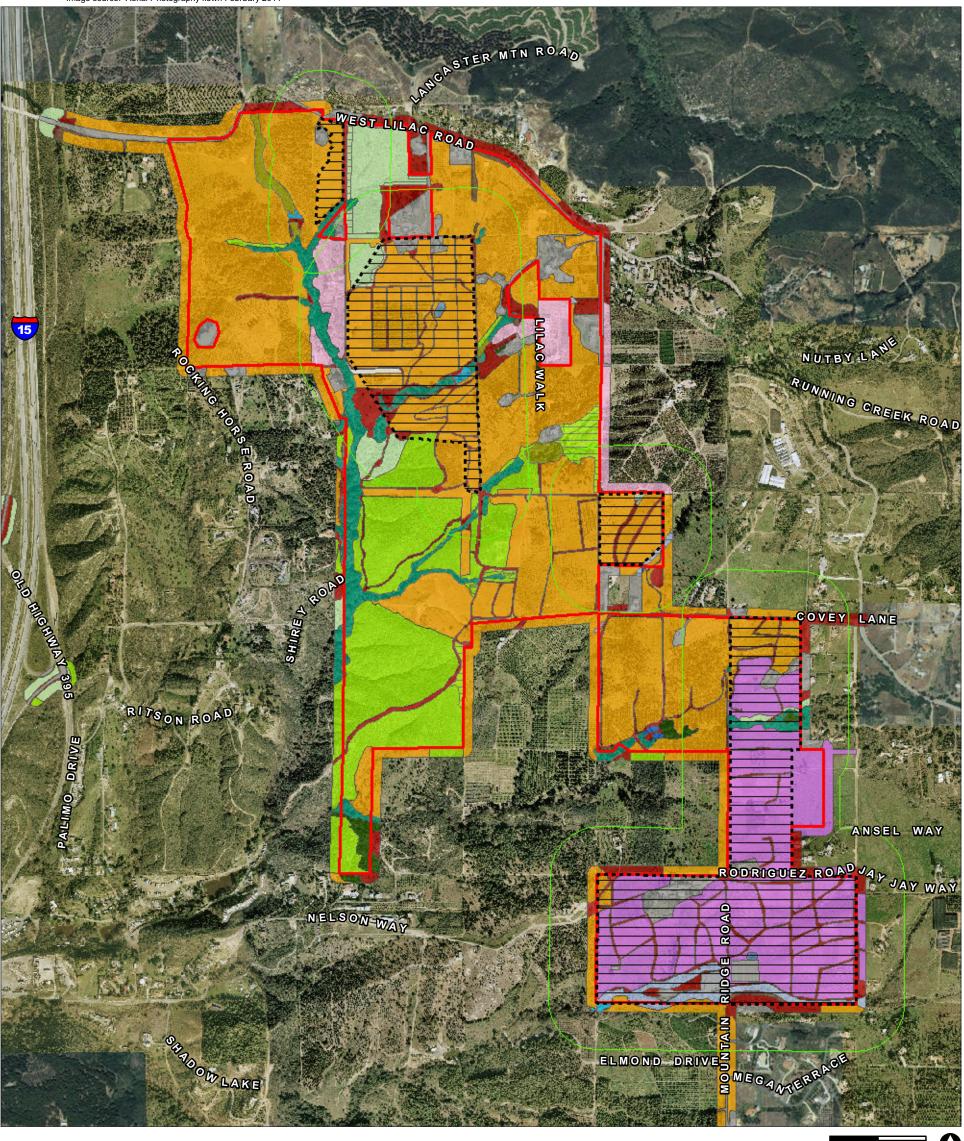












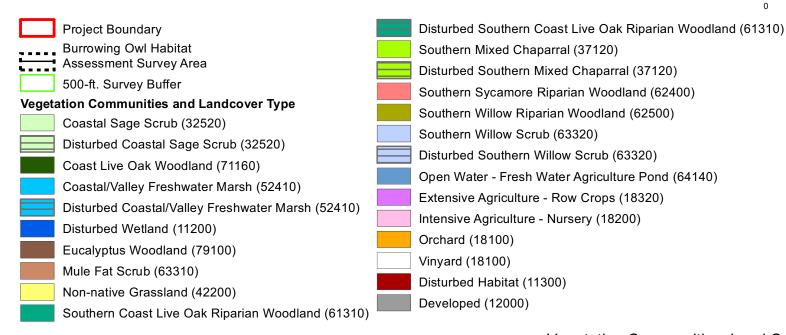


FIGURE 3

### **ATTACHMENT 5**

Stephens' Kangaroo Rat Habitat Assessment Report

1927 Fifth Avenue San Diego, CA 92101 P 619.308.9333 F 619.308.9334

2033 East Grant Road Tucson, AZ 85719 P 520.325.9977 F 520.293.3051 www.reconenvironmental.com

2027 Preisker Lane. Ste. G Santa Maria, CA 93454 P 619.308.9333 F 619.308.9334



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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 - 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

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

<sup>\*</sup>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

Mr. Jon Rilling Page 3 August 14, 2012

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

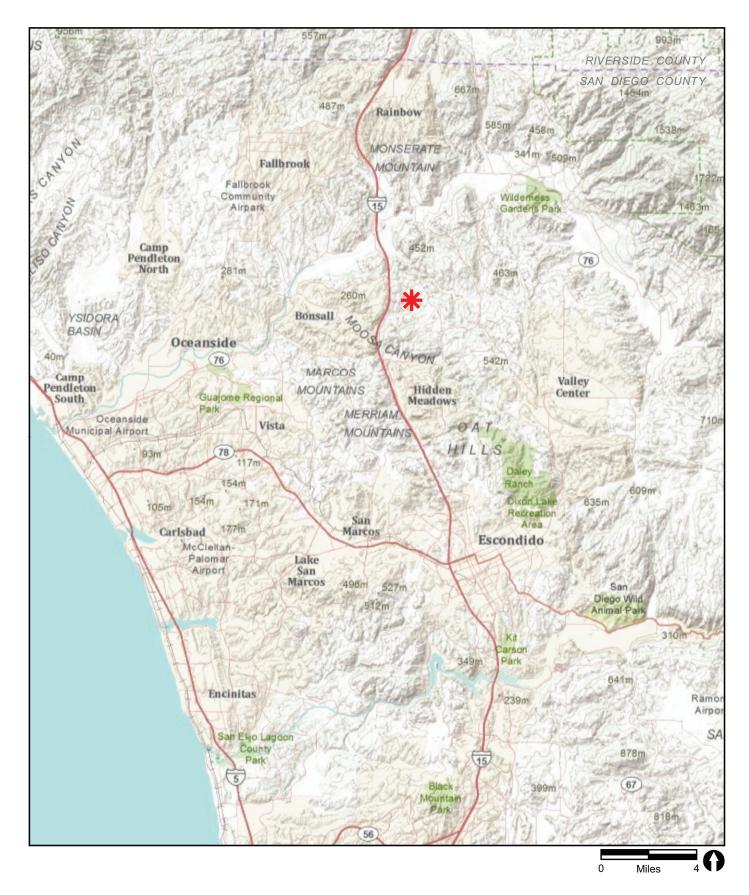
#### **References Cited**

California, State of

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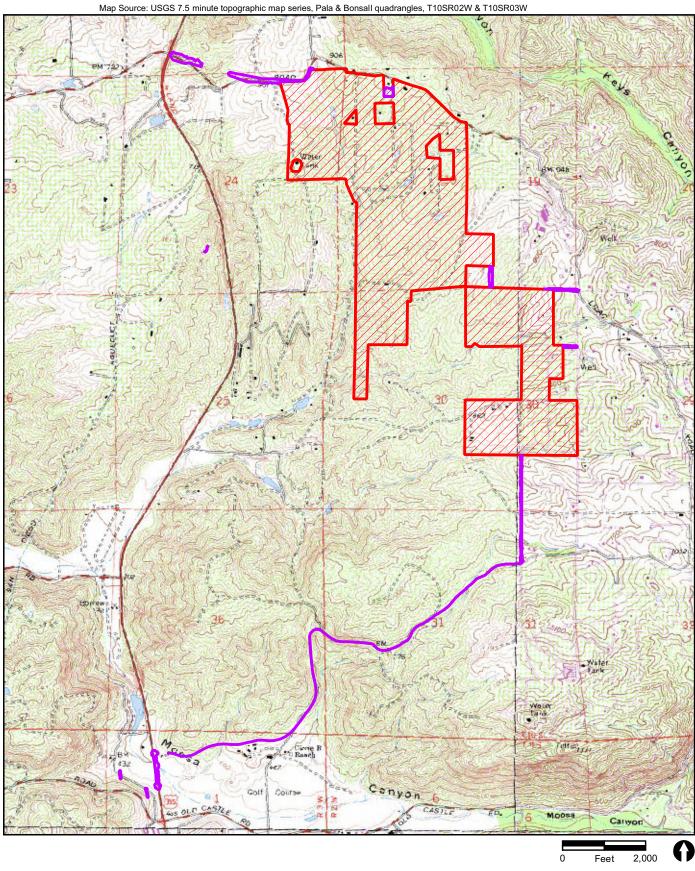
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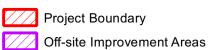
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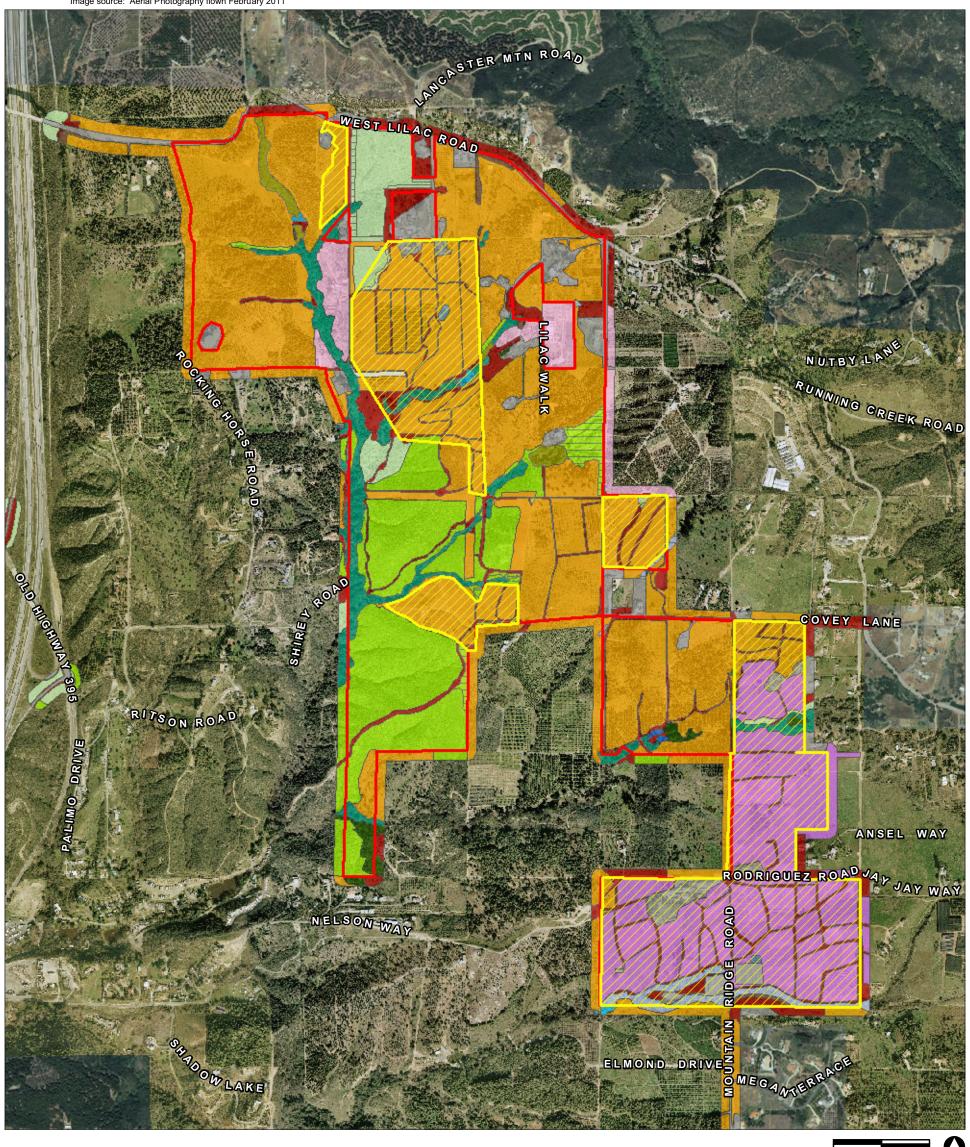












Southern Mixed Chaparral (37120) **Project Boundary** Stephens' Kangaroo Rat Habitat Assessment Survey Locations Disturbed Southern Mixed Chaparral (37120) **Vegetation Communities and Landcover Type** Southern Sycamore Riparian Woodland (62400) Coastal Sage Scrub (32520) Southern Willow Riparian Woodland (62500) Disturbed Coastal Sage Scrub (32520) Southern Willow Scrub (63320) Coast Live Oak Woodland (71160) Disturbed Southern Willow Scrub (63320) Coastal/Valley Freshwater Marsh (52410) Open Water - Fresh Water Agriculture Pond (64140) Disturbed Coastal/Valley Freshwater Marsh (52410) Extensive Agriculture - Row Crops (18320) Disturbed Wetland (11200) Intensive Agriculture - Nursery (18200) Eucalyptus Woodland (79100) Orchard (18100) Mule Fat Scrub (63310) Vinyard (18100) Non-native Grassland (42200) Disturbed Habitat (11300) Southern Coast Live Oak Riparian Woodland (61310) Developed (12000) Disturbed Southern Coast Live Oak Riparian Woodland (61310)

FIGURE 3

# ATTACHMENT 6 Arroyo Toad Habitat Assessment Report

1927 Fifth Avenue San Diego, CA 92101 P 619.308.9333 F 619.308.9334

2033 East Grant Road Tucson, AZ 85719 P 520.325.9977 F 520.293.3051 www.reconenvironmental.com

2027 Preisker Lane. Ste. G Santa Maria, CA 93454 P 619.308.9333 F 619.308.9334



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

<sup>\*</sup>AIB = Anna Bennett, EJM = Erin McKinney; GAS = Gerry Scheid; APF = Alex Fromer

Mr. Jon Rilling Page 3 August 14, 2012

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:sig

cc: Rikki Schroeder, RMA Consultants

Mr. Jon Rilling Page 4 August 14, 2012

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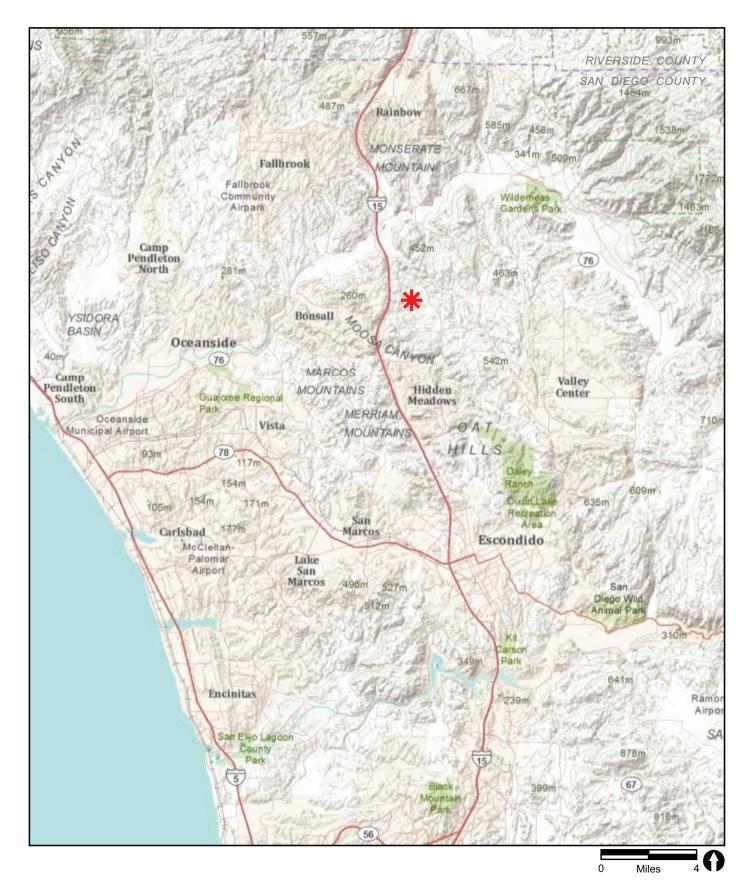
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- 2009 Endangered and Threatened Wildfire and Plants; Revised Critical Habitat for the Arroyo Toad (*Anaxyrus californicus*). Federal Register 74:196:52612-52664.
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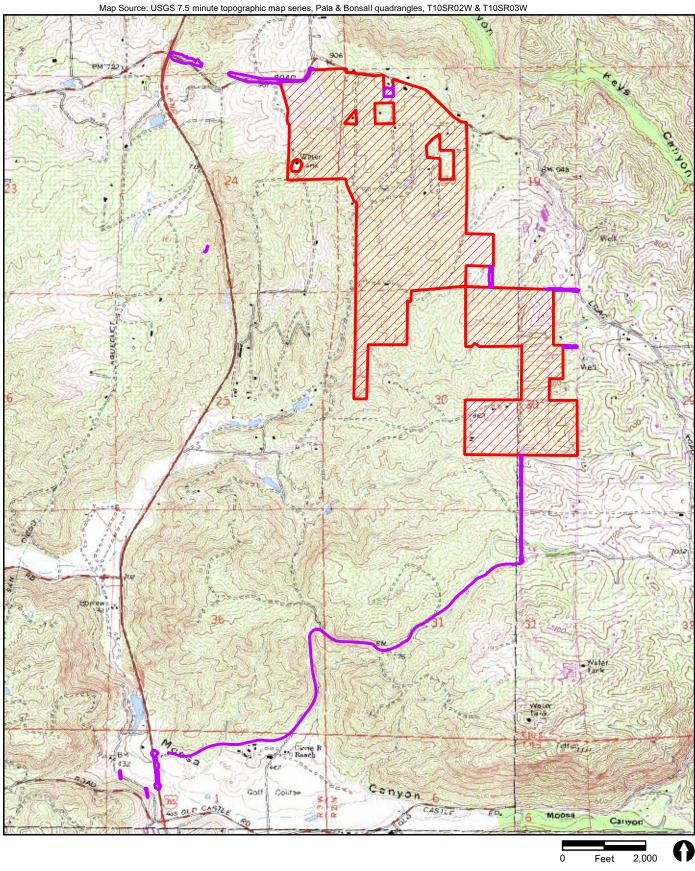
#### RECON Environmental, Inc.

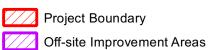
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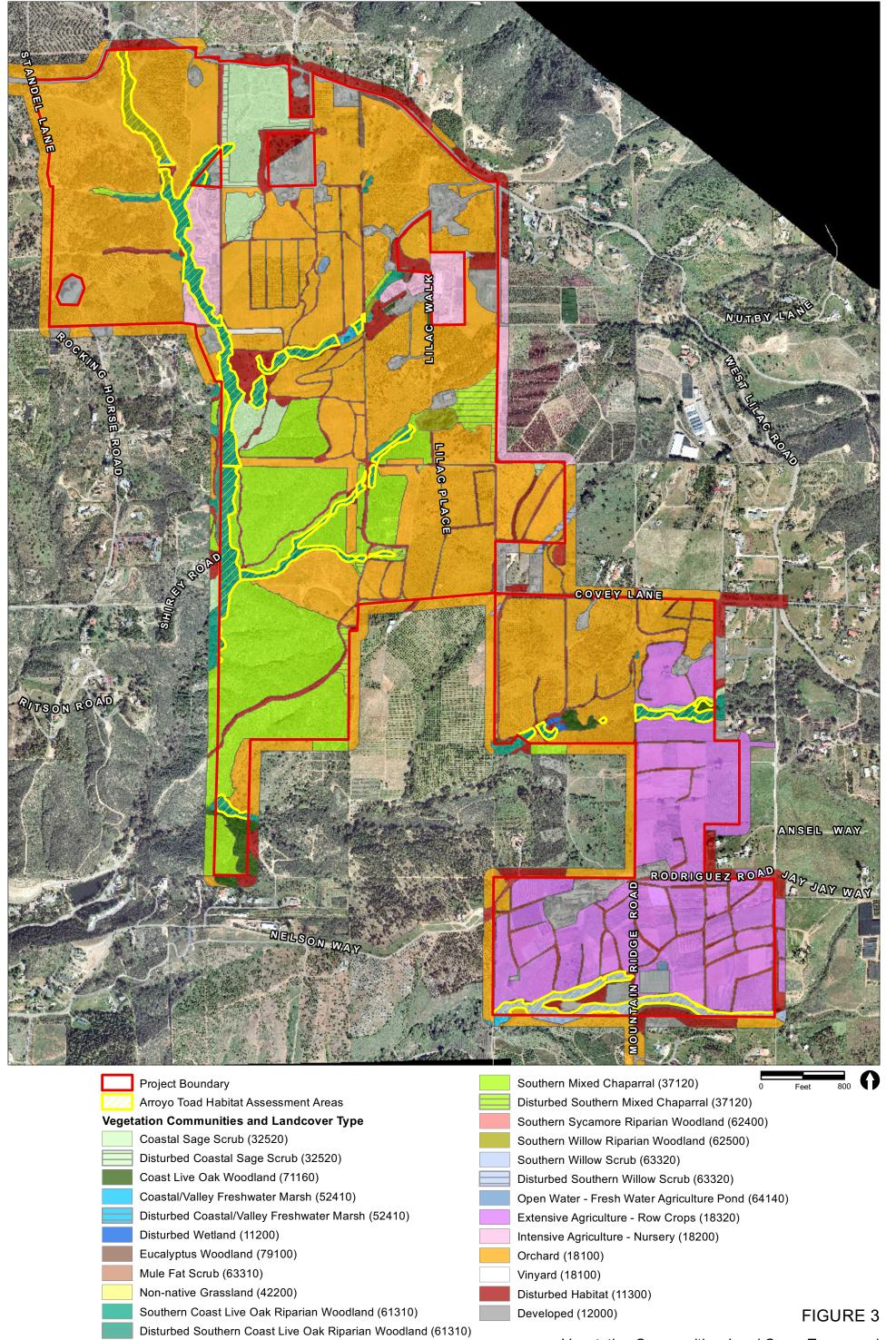












# ATTACHMENT 7 Plant Species Observed on Lilac Hills Ranch

### ATTACHMENT 7 PLANT SPECIES OBSERVED ON LILAC HILLS RANCH

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

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## 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
Турнаселе	CATTAIL FAMILY		
Typha latifolia L.	broad-leaved cattail	FM, M	N
ANGIO	OSPERMS: 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	1
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	1
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	1
Schinus terebinthifolius Raddi	Brazilian pepper tree	AG, O, H	1
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	1
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	1
Centaurea melitensis L.	tecalote, star-thistle	NNG, AG, O	1
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	1
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	Ν
Dimorphotheca pluvialis (L.) Moench	African daisy	AG, O, H	1
Encelia farinosa A. Gray ex Torr.	brittlebush, incienso	MC	N
Eriophyllum confertiflorum (DC.) A. Gray var. confertiflorum	golden-yarrow	MC, CSS	Ν
Gazania linearis (Thunb.) Druce	treasure flower	AG, H	1
Gnaphalium californicum DC.	green everlasting	MC	N
Gnaphalium luteoalbum L.	everlasting	MC	1
Gnaphalium stramineum Kunth	cotton-batting plant	MC	Ν
Hazardia squarrosa (Hook. & Arn.) Greene	saw-toothed goldenbush	MC	Ν
Helminthotheca [=Picris] echioides (L.) Holub	bristly ox-tongue	RW, M	1
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	1

Page 4 RECON

Scientific Name	Common Name	Habitat	Origin
Isocoma menziesii (Hook. & Arn.) G.L. Nesom	coast goldenbush	MC	N
Lactuca serriola L.	prickly lettuce	RW, M	1
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	1
Sonchus asper (L.) Hill ssp. asper	prickly sow thistle	RW, O	1
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	e 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	1
Hirschfeldia incana (L.) LagrFossat	short-pod mustard	NNG, AG, O	1
Lepidium lasiocarpum Nutt. var. lasiocarpum	sand peppergrass	MC	N
Nasturtium officinale [=Rorippa nasturtium-aquaticum] R. Br.	water cress	RW, M	1
Raphanus sativus L.	radish	AG, O	1
Sisymbrium officinale L.	hedge mustard	AG, O	I
Sisymbrium orientale L.	mustard	AG, O	1

Scientific Name	Common Name	Habitat	Origin
CACTACEAE	CACTUS FAMILY		
Opuntia ficus-indica (L.) Mill.	Indian fig	AG, MC, O	ı
Opuntia littoralis (Engelm.) Cockerell.	shore cactus	MC	Ν
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY		
Lonicera subspicata Hook. & Arn.	southern honeysuckle	MC	Ν
CARYOPHYLLACEAE	PINK FAMILY		
Silene gallica L.	windmill pink	MC	
Spergula arvensis L.	stickwort, starwort	MC, O	I
CHENOPODIACEAE	GOOSEFOOT FAMILY		
Atriplex semibaccata R. Br.	Australian saltbush	0	I
Chenopodium album L.	lamb's quarters, pigweed	AG, O	l
Chenopodium californicum (S. Watson) S. Watson	California pigweed	MC	N
Chenopodium murale L.	nettle-leaved goosefoot	AG, O	l
Dysphania [=Chenopodium] ambrosioides (L.) Mosyakin & Clemants	Mexican tea	AG, O	ļ
Salsola tragus L.	Russian thistle, tumbleweed	AG, O	l
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	Ν
Ipomoea purpurea (L.) Roth.	common morning-glory	Н	I
CRASSULACEAE	STONECROP FAMILY		
Dudleya pulverulenta (Nutt.) Britton & Rose	chalk lettuce, chalk dudleya	CSS, MC RW, OW	Ν
CUCURBITACEAE	GOURD FAMILY		
Marah macrocarpus (Greene) Greene	wild cucumber	CSS, MC	Ν
ERICACEAE	HEATH FAMILY		
Xylococcus bicolor Nutt.	mission manzanita	MC	Ν
EUPHORBIACEAE	Spurge Family		
Chamaesyce sp.	prostrate spurge	CSS, MC, O	N
Croton [=Eremocarpus] setigerus Hook.	dove weed	AG, O	Ν

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	Ν
Acmispon micranthus (Torr. & A. Gray) Brouillet [=Lotus hamatus]	grab lotus	MC	Ν
Lupinus bicolor Lindl.	miniature lupine	MC	Ν
Lupinus truncatus Nutt.	chaparral lupine	MC	Ν
Melilotus indicus (L.) All.	sourclover	AG, O, M	I
FAGACEAE	OAK FAMILY		
Quercus agrifolia Née	coast live oak, encina	RW, OW	Ν
Quercus berberidifolia Liebm.	scrub oak	RW	Ν
Quercus engelmannii Greene	Engelmann oak, mesa oak	RW, OW	Ν
GENTIANACEAE	GENTIAN FAMILY		
Zeltnera [=Centaurium] venusta (A. Gray) G. Mans.	canchalagua	MC	Ν
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	1
LAMIACEAE	MINT FAMILY		
Marrubium vulgare L.	horehound	AG, O , MC	1
Salvia columbariae Benth.	chia	MC	Ν
Salvia mellifera Greene	black sage	CSS, MC	N
Stachys ajugoides Benth. var. rigida (Nutt. ex Benth.) Jeps. & Hoover	hedge nettle	RW, OW	Ν
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	Ν
Malva parviflora L.	cheeseweed, little mallow	AG, O	1
Malvella leprosa (Ortega) Krapov.	alkali-mallow, white-weed	RW, M	Ν
MONTIACEAE	MONTIA FAMILY		
Calandrinia ciliata (Ruiz & Pav.) DC.	red maids	MC	Ν
Claytonia perfoliatà Willd.	miner's lettuce	MC, CSS, RW, OW	Ν
MYRTACEAE	MYRTLE FAMILY		
Eucalyptus sp.	gum tree	AG, H	I
••	•	,	

Scientific Name	Common Name	Habitat	Origin
MYRSINACEAE			
Anagallis arvensis L.	scarlet pimpernel, poor-man's weatherglass	AG, O	I
NYCTAGINACEAE  Mirabilis laevis [=californica] (Benth.) Curran var. crassifolia (Choisy)  Spellenb.	FOUR O'CLOCK FAMILY wishbone bush	MC	N
OLEACEAE Olea europaea L.	OLIVE FAMILY olive	AG, O, H	1
ONAGRACEAE Camissonia bistorta (Torr. & A. Gray) P.H. Raven Clarkia purpurea (Curtis) A. Nelson & J.F. Macbr. ssp. quadrivulnera (Douglas ex Lindl.) H. Lewis & M. Lewis Epilobium ciliatum Raf. ssp. ciliatum	EVENING-PRIMROSE FAMILY California sun cup four-spot sticky willowweed	MC MC RW, M	N N
PAEONIACEAE Paeonia californica Nutt.	PEONY FAMILY California peony	MC	N
PAPAVERACEAE Ehrendorferia [=Dicentra] chrysantha (Hook. & Arn.) Rylander Eschscholzia californica Cham.	POPPY FAMILY golden ear-drops California poppy	MC MC	N N
PHRYMACEAE [=SCROPHULARIACEAE]  Mimulus aurantiacus Curtis  Mimulus guttatus DC.	HOPSEED FAMILY low bush monkey-flower common monkey-flower	MC, CSS RW, M	N N
PLANTAGINACEAE Antirrhinum nuttallianum Benth. ex A. DC. Keckiella antirrhinoides (Benth.) Straw var. antirrhinoides Plantago erecta E. Morris Plantago major L.	PLANTAIN FAMILY Nuttall snapdragon yellow bush penstemon dot-seed plantain common plantain	CSS, MC MC CSS AG, O, H	N N N
PLATANACEAE Platanus racemosa Nutt.	PLANE TREE OR SYCAMORE FAMILY western sycamore	RW	N
POLEMONIACEAE Gilia sp. Navarretia hamata Greene	PHLOX FAMILY gilia hooked navarretia	MC MC	N N

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	Ν
Persicaria [=Polygonum] lapathifolium (L.) Gray	willow weed	RW, M	Ν
Polygonum aviculare L. ssp. depressum [=P. arenastrum] (Meisn.) Arcangeli	common knotweed, doorweed	AG, O	1
Pterostegia drymarioides Fisch. & C.A. Mey.	California thread-stem	CSS, MC	N
Rumex crispus L.	curly dock	RW, M, AG	1
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	1
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	Ν
RUTACEAE	RUE OR CITRUS FAMILY		
Cneoridium dumosum (Nutt. ex Torr. & A. Gray) Baill.	bushrue	MC	Ν
SALICACEAE	WILLOW FAMILY		
Populus fremontii S. Watson ssp. fremontii	Fremont cottonwood, alamo	RW	Ν
Salix exigua Nutt.	narrow-leaved willow	RW	N

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	1
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	1
ZYGOPHYLLACEAE	CALTROP FAMILY		
Tribulus terrestris L.	puncture vine	AG, O	1

**SOURCES:** Jepson Online Interchange <a href="http://ucjeps.berkeley.edu/interchange.html">http://ucjeps.berkeley.edu/interchange.html</a> (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 <a href="http://plants.usda.gov/">http://plants.usda.gov/</a> (USDA 2008).

Page 10 RECON

HABITATS ORIGIN

AG = Agriculture N = Native to locality

CSS = Coastal sage scrub

I = Introduced species from outside locality

FM = Freshwater marsh

H = Horticultural

M = Mesic areas and wetlandsMC = Southern mixed chaparralNNG = Non-native grassland

O = Open places, waste places, roadsides, burns, etc.

OW = Oak woodland RW = Riparian woodland

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Page 12 RECON

#### **ATTACHMENT 8**

### Wildlife Species Observed/Detected on Lilac Hills Ranch

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Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
INVERTEBRATES (Nomenclature from	n Eriksen and Belk 1999; Milne and Milne 19	80; Mattoni 1990; and Opler and W	/right 1999)	
HESPERIIDAE Erynnis funeralis Pyrgus communis	<b>SKIPPERS</b> funereal duskywing common checkered skipper	RW CSS	F C	0
Papilionidae Papilio rutulus	PARNASSIANS & SWALLOWTAILS western tiger swallowtail	RW	F	0
PIERIDAE Anthocharis sara Pontia protodice Pieris rapae	WHITES & SULPHURS Sara or Pacific orangetip common or checkered white cabbage white	CSS, MC CSS, MC, O CSS, MC, O	F C C	O O O
LYCAENIDAE Callophrys augustinus iroides Glaucopsyche lygdamus australis Icaricia acmon acmon Strymon melinus pudica	BLUES, COPPERS, & HAIRSTREAKS brown elfin southern or silvery blue Acmon blue common or gray hairstreak	MC CSS, MC CSS, MC MC	F F C F	0 0 0
RIODINIDAE Apodemia virgulti	<b>METALMARKS</b> Behr's metalmark	CSS, MC	С	0
NYMPHALIDAE Limenitis lorquini lorquini Coenonympha tullia california Junonia coenia Nymphalis antiopa antiopa Vanessa annabella Vanessa atalanta rubria Vanessa cardui	BRUSH-FOOTED BUTTERFLIES Lorquin's admiral California or common ringlet common buckeye mourning cloak west coast lady red admiral painted lady	RW CSS, MC, O CSS, MC CSS, MC, RW CSS, MC RW CSS, MC	F C C F C	0 0 0 0 0 0

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
AMPHIBIANS (Nomenclature from Cros	ther 2001 and Crother et al. 2003)			
<b>HYLIDAE</b> Pseudacris cadaverina Pseudacris regilla	TREE FROGS California treefrog Pacific treefrog	RW, M, FM RW, M, FM	C C	V V
RANIDAE Lithobates catesbeiana	True Frogs American bullfrog	RW, M, FM	F	O, V
REPTILES (Nomenclature from Crother	r 2001 and Crother et al. 2003)			
IGUANIDAE Phrynosoma coronatum (San Diego/blainvillii pop.)	IGUANID LIZARDS coast horned lizard	0	U	0
Sceloporus occidentalis Sceloporus orcutti Uta stansburiana	western fence lizard granite spiny lizard common side-blotched lizard	CSS, MC, AG, O CSS, MC, O CSS, MC	C F C	0 0 0
TEIIDAE Aspidoscelis hyperythra beldingi Aspidoscelis tigris punctilinealis Aspidoscelis tigris steinegeri	WHIPTAIL LIZARDS Belding's orange-throated whiptail Sonoran Tiger Whiptail Coastal whiptail	CSS, RW <del>O, AG</del> <u>O</u>	U <del>U</del> <u>U</u>	0 <u>0</u>
CROTALIDAE Crotalus ruber Crotalus oreganus helleri	RATTLESNAKES red diamond rattlesnake southern Pacific rattlesnake	O, MC MC	 U F	0
BIRDS (Nomenclature from American C	Ornithologists' Union 1998 and Unitt 2004)			
Anatidae Anas platyrhynchos platyrhynchos	DUCKS, GEESE, & SWANS mallard	RW, M	U/Y	0
ODONTOPHORIDAE Callipepla californica californica	<b>New World Quall</b> California quail	CSS, MC	C/Y	O, V

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
ARDEIDAE Egretta thula thula	HERONS & BITTERNS snowy egret	RW, M	U/W	0
CATHARTIDAE Cathartes aura	New World Vultures turkey vulture	F	F/M,S	0
Accipitridae Accipiter cooperii Buteo jamaicensis Buteo lineatus elegans Elanus leucurus	Hawks, Kites, & Eagles Cooper's hawk red-tailed hawk red-shouldered hawk white-tailed kite	RW, W, CSS F F RW,M	F/Y C/Y C/Y U/Y	O, V O, V O, V O, V
FALCONIDAE Falco sparverius sparverius	FALCONS & CARACARAS American kestrel	AG, MC	F/Y	0
CHARADRIIDAE Charadrius vociferus vociferus	LAPWINGS & PLOVERS killdeer	RW, M	U/Y	0
COLUMBIDAE Streptopeleia decaocto Zenaida macroura marginella	PIGEONS & DOVES Eurasian collared dove mourning dove	W CSS, MC, O, AG, W	U/Y C/Y	O O, V
CUCULIDAE Geococcyx californianus	CUCKOOS & ROADRUNNERS greater roadrunner	CSS, MC, O, AG	F/Y	0
STRIGIDAE Bubo virginianus	TYPICAL OWLS great horned owl	RW	U/ Y	0
APODIDAE Aeronautes saxatalis	Swifts white-throated swift	RW, M	F/Y	0
TROCHILIDAE Archilochus alexandri Calypte anna Calypte costae	Hummingbirds black-chinned hummingbird Anna's hummingbird Costa's hummingbird	CSS, MC CSS, MC, O, AG, W, RW CSS, MC	F / S C / Y F/ S	O, V O, V O,V

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
PICIDAE Colaptes auratus	WOODPECKERS & SAPSUCKERS northern flicker			O, V
•		RW, M, W	U/Y	•
Melanerpes formicivorus bairdi	acorn woodpecker	W	U/Y F/Y	O,V
Picoides nuttallii Picoides pubescens turati	Nuttall's woodpecker downy woodpecker	W, RW W, RW	F / Y U / Y	O, V O, V
TYRANNIDAE	TYRANT FLYCATCHERS			
Empidonax difficilis	Pacific slope flycatcher	RW, M, W	U/S	0
Myiarchus cinerascens cinerascens	ash-throated flycatcher	RW, M, W	U/S	Ο
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	0
Tyrannus vociferans vociferans	Cassin's kingbird	CSS, MC, O, AG,	C/Y	Ο
LANIIDAE	SHRIKES			
Lanius Iudovicianus	loggerhead shrike	AG	U/Y	Ο
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,	C/Y	O, V
		M, U		•
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	0
Stelgidopteryx serripennis	northern rough-winged swallow	RW, W, AG, M	F/S	0
PARIDAE	CHICKADEES & TITMICE			
Baeolophus inornatus transpositus	oak titmouse	W	U/Y	O,V
<b>A</b> EGITHALIDAE	Визнтіт			
Psaltriparus minimus minimus	bushtit	CSS, MC, O, AG, W, RW	C/Y	O, V

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
TROGLODYTIDAE Thryomanes bewickii Troglodytes aedon parkmanii	<b>WRENS</b> Bewick's wren house wren	CSS, MC, W, RW CSS, MC, O, AG, W, RW,M	F/Y C/Y	O, V O, V
TURDIDAE Sialia mexicana occidentalis	THRUSHES western bluebird	AG	U/W	0
TIMALIIDAE Chamaea fasciata henshawi	BABBLERS wrentit	CSS, MC, O, AG, W, RW	F/Y	O, V
MIMIDAE Mimus polyglottos polyglottos Toxostoma redivivum redivivum	MOCKINGBIRDS & THRASHERS northern mockingbird California thrasher	CSS, MC, AG, RW, M CSS, MC, W	C/Y F/Y	O, V O, V
Sturnidae Sturnus vulgaris	STARLINGS & MYNAS European starling (I)	O, U	C/Y	O, V
PTILOGONATIDAE Phainopepla nitens lepida	SILKY FLYCATCHERS phainopepla	CSS, MC, RW, M	F/Y	O, V
PARULIDAE  Dendroica coronata  Dendroica petechia  Geothlypis trichas Icteria virens auricollis  Vermivora celata	WOOD WARBLERS yellow-rumped warbler yellow warbler common yellowthroat yellow-breasted chat orange-crowned warbler	CSS, MC RW, M RW, M RW, M MC	F/W U/S F/Y F/Y	O, V O, V O, V O, V
EMBERIZIDAE Melospiza melodia Pipilo crissalis Pipilo maculatus	EMBERIZIDS song sparrow California towhee spotted towhee	CSS, MC, O, AG, W, RW,M CSS, MC, O, AG, W CSS, RW, M	C/Y C/Y C/Y	O, V O, V O, V
CARDINALIDAE Passerina caerulea salicaria Pheucticus melanocephalus maculatus	CARDINALS & GROSBEAKS blue grosbeak black-headed grosbeak	RW,M, W RW,M, W	F/S F/S	O, V 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	0
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	r et al. 2003)			
LEPORIDAE	RABBITS & HARES			
Lepus californicus bennettii	San Diego black-tailed jackrabbit	CSS, AG	U	0
Sylvilagus audubonii	desert cottontail	CSS, MC	F	0
SCIURIDAE	SQUIRRELS & CHIPMUNKS			
Spermophilus beecheyi	California ground squirrel	CSS, MC, W, O, Ag	F	0
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	Т
CERVIDAE	DEER			
Odocoileus hemionus	mule deer	MC	U	O, T

<sup>(</sup>I) = Introduced species

#### **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

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Page 8 RECON

#### **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 onsite 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).

Page 2 RECON

#### 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 Onsite	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 <i>Chorizanthe frimbiata</i> , and prostrate spineflower, <i>C. procumberns</i> .
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 Onsite	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 onsite, 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.

Page 4 RECON

#### 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 Onsite	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.

<sup>\*</sup>Sensitivity Codes and Status:

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.

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.

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

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Page 6 RECON

### ATTACHMENT 10 CNDDB Forms

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

Reset California Native Speci	ies Field Survey Form Send Form
Scientific Name: Chorizanthe procumbens	
Common Name: Prostrate spine flower	
Species Found?	Reporter: Gerry Scheid  Address: 1927 Fifth Avenue  San Diego, Ca 92101-2358  E-mail Address: gscheid@reconenvironmental.com  Phone: (619) 308-9333
	# juveniles # larvae # egg masses # unknown
Location Description (please attach map AND/OR fill of Located within the Lilac Hill Ranch project south and west of West Lilac Road the east, downtown Escondido 16 miles to the south, and Interstate 15 and Old County: San Diego Lanc Quad Name: Bonsall  T R Sec,¼ of¼, Meridian: H□ M□ S□ T R Sec,¼ of¼, Meridian: H□ M□ S□ DATUM: NAD27 □ NAD83 ☑ WGS84 □ Coordinate System: UTM Zone 10 □ UTM Zone 11 □ OR	with State Route 76 to the north, downtown Valley Center 10 miles to
Habitat Description (plants & animals) plant communities, dominants Animal Behavior (Describe observed behavior, such as territoriality, foraging, Observed in the project area within and adjacent to mixed chaparral, and	singing, calling, copulating, perching, roosting, etc., especially for avifauna):
Please fill out separate form for other rare taxa seen at this site.  Site Information Overall site/occurrence quality/viability (site + popul Immediate AND surrounding land use: Agriculture Visible disturbances: Fuel management zones and agriculture Threats: Agriculture and development Comments:	lation): ☐ Excellent ☑ Good ☐ Fair ☐ Poor
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):	Photographs: (check one or more) Slide Print Digital Plant / animal

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

Reset California Nati	ve Spec	ies Field Survey Form	Send Form
Scientific Name: Juneus acutus ssp. leopoldii			
Common Name: Southwestern spiny rush			
Species Found?		Reporter: Gerry Scheid	0.00
Yes No If not, why?		Address: 1927 Fifth Avenue	
Total No. Individuals 20 Subsequent Visit? y		San Diego, Ca 92101-2358	
Is this an existing NDDB occurrence? Yes, Occ. #	io 🔲 unk.	E-mail Address: gscheid@reconenvi	ronmental.com
Collection? If yes: Museum / Herbariu	um	Phone: (619) 308-9333	
		4:	
	nimal Informa	uon	
Phenology:%100%100%	# adults  U wintering b		masses # unknown  www.site other
Located within the Lilac Hill Ranch project south and west of V the cast, downtown Escondido 16 miles to the south, and Interst County: San Diego  Quad Name: Bonsall	tate 15 and Old	Highway 395 to the west.  downer / Mgr.: ACCRETIVE INVESTMENT	
R Sec,¼ of¼, Meridian DATUM: NAD27	□ 11□ <i>OR</i>	Horizontal Accuracy	meters/fe
Habitat Description (plants & animals) plant communals Animal Behavior (Describe observed behavior, such as territor (Describe) Observed in the project area within a drainage course.			tc., especially for avifauna)
Please fill out separate form for other rare taxa seen at this site.			
Site Information Overall site/occurrence quality/viabili mmediate AND surrounding land use: Agriculture	ity (site + popu	ulation):	☑ Fair ☐ Poor
/isible disturbances: Fuel management zones and agriculture			
Fhreats: Agriculture and development			
Comments:			
Determination: (check one or more, and fill in blanks)  Keyed (cite reference): The Jepson Manual		Photographs: (check one or m	
Compared with specimen housed at: Compared with photo / drawing in:		Habitat Diagnostic feature	
By another person (name):			
Other:		May we obtain duplicates at ou	rexpense? yes no

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

Reset California N	lative Spec	ies Field Survey Form	Send Form
Scientific Name: Phrynosoma coronatum	(San Diego/b	olainvillii pop.)	
Common Name: Coast horned lizard			
	o. Individuals Subsequent Visit? yes no an existing NDDB occurrence? no unk.		onmental.com
Plant Information	Animal Informa	tion	
Phenology:%%% vegetative flowering fruiting	# adults	# juveniles # larvae # egg ma	
Location Description (please attach map Located within the Lilac Hill Ranch project south and we the east, downtown Escondido 16 miles to the south, and County: San Diego Quad Name: Bonsall T R Sec, ¼ of ¼, Me	st of West Lilac Road Interstate 15 and Old Land	with State Route 76 to the north, downtown Va Highway 395 to the west. downer / Mgr.: <u>ACCRETIVE INVESTMEN</u> Elevation:	lley Center 10 miles to
TRSec,¼ of¼, Me  DATUM: NAD27	SS84 ☐ one 11 ☐ OR	GPS Make & Model  Horizontal Accuracy  Geographic (Latitude & Longitude)	meters/fee
Habitat Description (plants & animals) plant co Animal Behavior (Describe observed behavior, such as Species observed just off-site on a dirt road near sou Please fill out separate form for other rare taxa seen at this	s territoriality, foraging, thern mixed chapar	singing, calling, copulating, perching, roosting, etc.	
Site Information Overall site/occurrence quality/ Immediate AND surrounding land use: Agriculture Visible disturbances: Fuel management zones and agriculture and development Comments:	viability (site + popu	ulation): Excellent Good	☑ Fair ☐ Poor
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 mo Plant / animal Habitat Diagnostic feature  May we obtain duplicates at our	

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

Scientific Name: Odocoileus hemionus fuliginata	Species Field Survey Form Send Form
	ı
Common Name: Southern mule deer	
Species Found?	Reporter: Gerry Scheid
	Address: 1927 Fifth Avenue
하다 이 그리고 하다를 하나가 있다. 나를 통하는 생생들이 보고 말하다면 보기가 되었다. 얼마 등록 하나 모든 것	no San Diego, Ca 92101-2358
s this an existing NDDB occurrence?	unk. E-mail Address: gscheid@reconenvironmental.com
Collection? If yes:	Phone: (619) 308-9333
Plant Information Animal	Information
Phenology:%% # adulting # adulting # adulting # wintering # wintering # wintering # # adulting # # # # # # # # # # # # # # # # # # #	
he east, downtown Escondido 16 miles to the south, and Interstate 15 county: San Diego	Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLI
Quad Name: Bonsall	Elevation:
R Sec,¼ of¼, Meridian: H□	그 그 그 그 그 이 이 이 이 가는 그렇게 그리고 있는데 얼마나 되었다. 그는 그 그는 그는 그는 그는 그는 그는 그를 보는 것이 되는 것이 되었다. 그는 그를 보는 그를 보는 것이 없는 그를 보는 것이다.
R Sec,¼ of¼, Meridian: H□	
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐	Horizontal Accuracy meters/fe
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐	4 이 보겠어요. 이번 시간을 하다면 전 되었다면 된 보다 하다면 하는데 그녀를 모르는데 그 그래요.
coordinates: A group of four individuals at: 117 deg. 8 min. 16	6.9 sec. W; 33 deg. 17 min. 21.3 sec. N
	r, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna)
Observed on-site in southern mixed chaparral and southern coa:	
lease fill out separate form for other rare taxa seen at this site.	
lease fill out separate form for other rare taxa seen at this site.  ite Information Overall site/occurrence quality/viability (site	te + population): ☐ Excellent ☐ Good ☐ Fair ☐ Poor
lease fill out separate form for other rare taxa seen at this site.  Ite Information Overall site/occurrence quality/viability (site inmediate AND surrounding land use: Agriculture	e + population): ☐ Excellent ☐ Good ☐ Fair ☐ Poor
lease fill out separate form for other rare taxa seen at this site.  Fite Information Overall site/occurrence quality/viability (site inmediate AND surrounding land use: Agriculture isible disturbances: Fuel management zones and agriculture	e + population): ☐ Excellent ☐ Good ☐ Fair ☐ Poor
Please fill out separate form for other rare taxa seen at this site.  Site Information Overall site/occurrence quality/viability (site immediate AND surrounding land use: Agriculture fisible disturbances: Fuel management zones and agriculture fibreats: Agriculture and development comments:	re + population): ☐ Excellent ☐ Good ☐ Fair ☐ Poor
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Please fill out separate form for other rare taxa seen at this site.  Site Information Overall site/occurrence quality/viability (site inmediate AND surrounding land use: Agriculture fisible disturbances: Fuel management zones and agriculture threats: Agriculture and development comments:	Photographs: (check one or more) Slide Print Digit Plant / animal

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

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

	Species Field Survey Form Send Form
Scientific Name: Lepus californicus bennettii	
Common Name: San Diego black-tailed jackrabb	oit
	Reporter: Gerry Scheid  Address: 1927 Fifth Avenue  San Diego, Ca 92101-2358  E-mail Address: gscheid@reconenvironmental.com  Phone: (619) 308-9333
Number Museum / Herbarium	Priorie. (435) data see
Plant Information Animal	Information
Phenology:%% # adulty wegetative flowering fruiting winterin	
the cast, downtown Escondido 16 miles to the south, and Interstate 15  County: San Diego  Quad Name: Bonsall and Pala  R Sec, ¼ of ¼, Meridian: H□	Landowner / Mgr.: ACCRETIVE INVESTMENTS, INC./JON RILLIN Elevation:
R Sec	Horizontal Accuracy meters/fe  OR Geographic (Latitude & Longitude)  min. 19.6 sec. N
	inni. 57.1 sec. 14
Habitat Description (plants & animals) plant communities, of Animal Behavior (Describe observed behavior, such as territoriality, Observed on-site near coastal sage scrub and orchards.	
Habitat Description (plants & animals) plant communities, of Animal Behavior (Describe observed behavior, such as territoriality, Disserved 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)	dominants, associates, substrates/soils, aspects/slope: v, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna).
Habitat Description (plants & animals) plant communities, of Animal Behavior (Describe observed behavior, such as territoriality, Disserved 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 immediate AND surrounding land use: Agriculture	dominants, associates, substrates/soils, aspects/slope: v, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna).
Habitat Description (plants & animals) plant communities, of Animal Behavior (Describe observed behavior, such as territoriality, 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 mediate AND surrounding land use: Agriculture Visible disturbances: Fuel management zones and agriculture	dominants, associates, substrates/soils, aspects/slope: v, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna).
Habitat Description (plants & animals) plant communities, of Animal Behavior (Describe observed behavior, such as territoriality, 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 (sitemmediate AND surrounding land use: Agriculture Visible disturbances: Fuel management zones and agriculture Threats: Agriculture and development	dominants, associates, substrates/soils, aspects/slope: v, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna).
Habitat Description (plants & animals) plant communities, of Animal Behavior (Describe observed behavior, such as territoriality, 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 mmediate AND surrounding land use: Agriculture visible disturbances: Fuel management zones and agriculture Threats: Agriculture and development	dominants, associates, substrates/soils, aspects/slope: v, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna).
Habitat Description (plants & animals) plant communities, of	dominants, associates, substrates/soils, aspects/slope:  t, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna)  te + population):

Date of Field Work (mm/dd/vvvv): 06/03/2011

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

Reset California N	lative Spec	ies Field Survey Form	Send Form
Scientific Name: Lanius ludovicianus			
Common Name: Loggerhead shrike			
Species Found?		Reporter: Gerry Scheid	
Yes No If not, wh		Address: 1927 Fifth Avenue	
otal No. Individuals Subsequent Visit?		San Diego, Ca 92101-2358	
s this an existing NDDB occurrence?	☑ no ☐ unk.	E-mail Address: gscheid@reconenviro	onmental.com
Collection? If yes:		Phone: (619) 308-9333	
Number Museum / H			
Plant Information	Animal Informa	tion	
Phenology:%%%	# adults	# juveniles # larvae # egg ma	asses # unknown
vegetative flowering fruiting			
		preeding nesting rookery burrow	
ATUM: NAD27 ☐ NAD83 ☑ WG	ridian: H□ M□ S□ SS84 □ one 11 □ OR	Horizontal Accuracy	
	one 11 OR 7 min. 21.9 sec. N mmunities, dominant is territoriality, foraging	Horizontal Accuracy  Geographic (Latitude & Longitude)   s, associates, substrates/soils, aspects/slope:	meters/fe
Coordinate System: UTM Zone 10 UTM Zoordinate System: UTM Zone 10 UTM Zoordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. In the state of the second se	one 11 OR 7 min. 21.9 sec. N mmunities, dominants territoriality, foraging hard. site.	Horizontal Accuracy	meters/fe
DATUM: NAD27 NAD83 WG  Coordinate System: UTM Zone 10 UTM Z  Coordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. If  Coordinates: 117 deg. 7 min. 53.5 sec. W;	one 11 OR 7 min. 21.9 sec. N mmunities, dominants territoriality, foraging hard. site.	Horizontal Accuracy	meters/fe
Coordinate System: UTM Zone 10 UTM Zoordinate System: UTM Zone 10 UTM Zoordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. It debitat Description (plants & animals) plant continual Behavior (Describe observed behavior, such as Observed on-site near southern mixed chaparral, orce delease fill out separate form for other rare taxa seen at this cite Information Overall site/occurrence quality/mmediate AND surrounding land use: Agriculture disible disturbances: Fuel management zones and agriculture disible disturbances: Fuel management zones and agriculture	one 11 OR 7 min. 21.9 sec. N mmunities, dominants territoriality, foraging hard. site.	Horizontal Accuracy	meters/fe
partum: NAD27 NAD83 Woordinate System: UTM Zone 10 UTM Zone 11 Todes. 7 min. 53.5 sec. W; 33 deg. Is abitat Description (plants & animals) plant continual Behavior (Describe observed behavior, such as Observed on-site near southern mixed chaparral, ore lease fill out separate form for other rare taxa seen at this ite Information Overall site/occurrence quality/mediate AND surrounding land use: Agriculture isible disturbances: Fuel management zones and agricultureats: Agriculture and development	one 11 OR 7 min. 21.9 sec. N mmunities, dominants territoriality, foraging hard. site.	Horizontal Accuracy	meters/fe
Coordinate System: UTM Zone 10 UTM Zoordinate System: UTM Zone 10 UTM Zoordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. It description (plants & animals) plant contained Behavior (Describe observed behavior, such as Observed on-site near southern mixed chaparral, ore described on-site near southern mixed chaparral, ore described on-site near southern mixed chaparral, ore description. Overall site/occurrence quality/mmediate AND surrounding land use: Agriculture distible disturbances: Fuel management zones and agriculture and development comments:	one 11 OR 7 min. 21.9 sec. N mmunities, dominants territoriality, foraging hard. site.	Horizontal Accuracy	meters/fe
DATUM: NAD27 NAD83 WG  coordinate System: UTM Zone 10 UTM Z  coordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. II  clabitat Description (plants & animals) plant coordinates plant of the coordinates of th	one 11 OR 7 min. 21.9 sec. N mmunities, dominant s territoriality, foraging hard.  site.  viability (site + populature	Horizontal Accuracy	meters/fe
Coordinate System: UTM Zone 10 UTM Zoordinate System: UTM Zone 10 UTM Zoordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. Is coordinates: 117 deg. 117 deg. 7 min. 53.5 sec. W; 33 deg. Is coordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. Is coordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. Is coordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg. Is coordinates: 117 deg. 117	one 11 OR 7 min. 21.9 sec. N mmunities, dominants territoriality, foraging thard.  site. viability (site + populature	Horizontal Accuracy	meters/fe

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

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

	Species Field Survey Form Send Form
Scientific Name: Dendroica petechia	
Common Name: Yellow warbler	
Species Found?  Yes No  If not, why?  Total No. Individuals  Subsequent Visit? yes	Reporter: Gerry Scheid  Address: 1927 Fifth Avenue
하다는 전 10 20 10 10 10 10 10 10 10 10 10 10 10 10 10	San Diego, Ca 92101-2358  E-mail Address: gscheid@reconenvironmental.com  Phone: (619) 308-9333
Plant Information Animal I	Information
Phenology:%%% # adult   vegetative flowering fruiting   wintering	
Location Description (please attach map AND/O Located within the Lilac Hill Ranch project south and west of West Lithe east, downtown Escondido 16 miles to the south, and Interstate 15 County: San Diego	ilac Road with State Route 76 to the north, downtown Valley Center 10 miles to
Quad Name: Pala	Elevation:
I R Sec	M□ S□ GPS Make & Model meters/fee  OR Geographic (Latitude & Longitude) ☑
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):
<b>Animal Behavior</b> (Describe observed behavior, such as territoriality, Observed on-site in southern willow scrub and southern coast li	foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):
Animal Behavior (Describe observed behavior, such as territoriality, Observed on-site in southern willow scrub and southern coast li  Please fill out separate form for other rare taxa seen at this site.  Site Information Overall site/occurrence quality/viability (site	foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna): ive oak riparian woodland.
Animal Behavior (Describe observed behavior, such as territoriality, Observed on-site in southern willow scrub and southern coast lipe Please fill out separate form for other rare taxa seen at this site.  Site Information Overall site/occurrence quality/viability (site mmediate AND surrounding land use: Agriculture	foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna): ive oak riparian woodland.
Animal Behavior (Describe observed behavior, such as territoriality, Observed on-site in southern willow scrub and southern coast li  Please fill out separate form for other rare taxa seen at this site.  Site Information Overall site/occurrence quality/viability (site mmediate AND surrounding land use: Agriculture Visible disturbances: Fuel management zones and agriculture	foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna): ive oak riparian woodland.
Animal Behavior (Describe observed behavior, such as territoriality, Observed on-site in southern willow scrub and southern coast li  Please fill out separate form for other rare taxa seen at this site.  Site Information Overall site/occurrence quality/viability (site mmediate AND surrounding land use: Agriculture  //isible disturbances: Fuel management zones and agriculture  Threats: Agriculture and development	foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna): ive oak riparian woodland.
Animal Behavior (Describe observed behavior, such as territoriality, Observed on-site in southern willow scrub and southern coast li  Please fill out separate form for other rare taxa seen at this site.  Site Information Overall site/occurrence quality/viability (site immediate AND surrounding land use: Agriculture visible disturbances: Fuel management zones and agriculture Threats: Agriculture and development  Comments:	foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna): ive oak riparian woodland.  e + population):
Animal Behavior (Describe observed behavior, such as territoriality, Observed on-site in southern willow scrub and southern coast li  Please fill out separate form for other rare taxa seen at this site.  Site Information Overall site/occurrence quality/viability (site immediate AND surrounding land use: Agriculture Visible disturbances: Fuel management zones and agriculture Threats: Agriculture and development	roraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna) ive oak riparian woodland.  e + population): □ Excellent □ Good □ Fair □ Poor  Photographs: (check one or more) Slide Print Digit Plant / animal □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

		_
	For Office Use Only	
Source Code	Quad Code	
Elm Code	Occ. No	_
EO Index No.	Map Index No	_ ,
		1

	ative Species	s Field Survey Form Send Fo	<i>)</i> 1111
Scientific Name: Neotoma lepida intermed	lia		
Common Name: San Diego desert woodra	nt		
Species Found?  Yes No If not, why  Total No. Individuals nests commo Subsequent Visit?  Is this an existing NDDB occurrence?  Yes, Occ. #  Collection? If yes:  Number Museum / He	□ yes □ no ☑ no □ unk.	Reporter: _Gerry Scheid Address: _1927 Fifth Avenue _San Diego, Ca 92101-2358 E-mail Address: _gscheid@reconenvironmental.com Phone: _(619) 308-9333	
Plant Information	Animal Information	1	
Phenology:%%% fruiting	# adults		unknown
the east, downtown Escondido 16 miles to the south, and Ir  County: San Diego  Quad Name: Bonsall  T R Sec, 1⁄4 of 1⁄4, Merical Section   1/4 of	terstate 15 and Old Hig  Landow  dian: H  M  S	th State Route 76 to the north, downtown Valley Center 10 m hway 395 to the west.  Inter / Mgr.: ACCRETIVE INVESTMENTS, INC./JON  Elevation:  Source of Coordinates (GPS, topo. map & type):  GPS Make & Model	RILLIN
	S84 ☐ ne 11 ☐ <i>OR</i> (	Horizontal Accuracy m Geographic (Latitude & Longitude) ☑	eters/fee
Habitat Description (plants & animals) plant con Animal Behavior (Describe observed behavior, such as Nests observed on-site in southern mixed chaparral, c	territoriality, foraging, sin	ging, calling, copulating, perching, roosting, etc., especially for a	avifauna):
Please fill out separate form for other rare taxa seen at this s	ite.		
Please fill out separate form for other rare taxa seen at this s  Site Information Overall site/occurrence quality/vi Immediate AND surrounding land use: Agriculture		on): □ Excellent ☑ Good □ Fair □	] Poor
Site Information Overall site/occurrence quality/vi	iability (site + populati	on): □ Excellent ☑ Good □ Fair □	] Poor
Site Information Overall site/occurrence quality/violated AND surrounding land use: Agriculture Visible disturbances: Fuel management zones and agricul	iability (site + populati	on): □ Excellent ☑ Good □ Fair □	] Poor
Site Information Overall site/occurrence quality/vi	iability (site + populati	on): □ Excellent ☑ Good □ Fair □	] Poor

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

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

Reset California N	Native Speci	es Field Survey Fo	rm	Send Form
Scientific Name: Icteria virens auricollis				
Common Name: Yellow breasted chat				
Species Found?		Reporter: Gerry Scheid		
		Address: 1927 Fifth Avenu	ie	
Total No. Individuals5 Subsequent Visit?		San Diego, Ca 92101-2358		
Is this an existing NDDB occurrence?Yes, Occ. #	☑no ☐unk.	E-mail Address: gscheid@re	econenvironmen	ntal.com
Collection? If yes: Museum / h	Herbarium	Phone: (619) 308-9333	_	
Plant Information	Animal Informat	ion		
-iant information	Animai miormat	ion		
Phenology:%	# adults  Wintering br	# juveniles # larvae	# egg masses  burrow site	# unknown other
the east, downtown Escondido 16 miles to the south, and  County: San Diego  Quad Name: Bonsall and Pala  T R Sec, ¼ of ¼, Me	Land	owner / Mgr.: ACCRETIVE INV  El  Source of Coordinates (GPS,	levation: , topo. map & ty	pe):
T R Sec,¼ of¼, Me  DATUM: NAD27  NAD83  WG  Coordinate System: UTM Zone 10  UTM Z  Coordinates: One at: 117 deg. 8 min. 18.2 sec. W;  Four individuals at or around: 117 deg.	GS84 ☐ Zone 11 ☐ <i>OR</i> 33 deg. 17 min. 10,9	Horizontal Accuracy Geographic (Latitude & Longitusec. N		meters/fee
Habitat Description (plants & animals) plant of Animal Behavior (Describe observed behavior, such a Observed on-site in southern willow scrub and south	s territoriality, foraging,	singing, calling, copulating, perching, i		ecially for avifauna):
Please fill out separate form for other rare taxa seen at this	site.			
Site Information Overall site/occurrence quality		ation): ☐ Excellent ☑ (	Good □Fa	air 🔲 Poor
Site Information Overall site/occurrence quality		ation):	Good □Fa	air 🔲 Poor
Site Information Overall site/occurrence quality/mmediate AND surrounding land use: Agriculture	/viability (site + popul	ation):	Good □Fa	air 🔲 Poor
Please fill out separate form for other rare taxa seen at this  Site Information Overall site/occurrence quality, mmediate AND surrounding land use: Agriculture Visible disturbances: Fuel management zones and agric Threats: Agriculture and development	/viability (site + popul	ation): 🔲 Excellent 🗹 0	Good □Fa	air 🔲 Poor
More Information Overall site/occurrence quality/ mmediate AND surrounding land use: Agriculture //isible disturbances: Fuel management zones and agric Threats: Agriculture and development	/viability (site + popul	ation):	Good □Fa	air 🔲 Poor
Site Information Overall site/occurrence quality, mmediate AND surrounding land use: Agriculture /isible disturbances: Fuel management zones and agric	/viability (site + popul	ation):	ck one or more) S	air Poor  Slide Print Digital

Date of Field Work	(mm/dd/nnn).	06/06/2011
Date of Field Work	(mm/aa/vvvv):	1000012011

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

Scientific Name: Sialia mexicana occid	Native Spec	ies Field Survey Form	Send Form
Scientific Name. Statta mexicana occia	entalis		
Common Name: Western bluebird			
Species Found? Yes No If not, Total No. Individuals Subsequent Visi	, why? it? ☐ yes ☐ no	Reporter: Gerry Scheid Address: 1927 Fifth Avenue	-
Is this an existing NDDB occurrence?  Yes, Occ.  Collection? If yes:	☑no □unk.	San Diego, Ca 92101-2358  E-mail Address: gscheid@reconenviro Phone: (619) 308-9333	onmental.com
Plant Information	Animal Informa	tion	
Phenology: % 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5	# adults	# juveniles # larvae # egg ma	
Location Description (please attach me Located within the Lilac Hill Ranch project south and we the east, downtown Escondido 16 miles to the south, ar County: San Diego	west of West Lilac Road nd Interstate 15 and Old	with State Route 76 to the north, downtown Val	ley Center 10 miles to
Quad Name: Bonsall			
Γ R Sec, ¼ of ¼, Μ			
T R Sec, ¼ of ¼, M  DATUM: NAD27 □ NAD83 □ W  Coordinate System: UTM Zone 10 □ UTM  Coordinates: 117 deg. 7 min. 53.5 sec. W; 33 deg	WGS84 ☐ Zone 11 ☐ OR	Horizontal Accuracy	meters/fee
Habitat Decaription (plants & animals) plant		s, associates, substrates/soils, aspects/slope:	
Animal Behavior (Describe observed behavior, such Observed on-site in southern mixed chaparral.	h as territoriality, foraging,	, singing, calling, copulating, perching, roosting, etc	., especially for avifauna);
Animal Behavior (Describe observed behavior, such Observed on-site in southern mixed chaparral.		, singing, calling, copulating, perching, roosting, etc	., especially for avifauna);
Animal Behavior (Describe observed behavior, such Observed on-site in southern mixed chaparral.  Please fill out separate form for other rare taxa seen at the Site Information Overall site/occurrence quality	nis site.		., especially for avifauna): ☑Fair ☐ Poor
Animal Behavior (Describe observed behavior, such Observed on-site in southern mixed chaparral.  Please fill out separate form for other rare taxa seen at the Site Information Overall site/occurrence quality mmediate AND surrounding land use: Agriculture	nis site. ty/viability (site + popu		
Animal Behavior (Describe observed behavior, such Observed on-site in southern mixed chaparral.  Please fill out separate form for other rare taxa seen at the Site Information Overall site/occurrence quality mmediate AND surrounding land use: Agriculture Visible disturbances: Fuel management zones and agriculture and surrounding land use.	nis site. ty/viability (site + popu		
Animal Behavior (Describe observed behavior, such Observed on-site in southern mixed chaparral.  Please fill out separate form for other rare taxa seen at the Site Information Overall site/occurrence qualified mmediate AND surrounding land use: Agriculture /isible disturbances: Fuel management zones and agr	nis site. ty/viability (site + popu		
Animal Behavior (Describe observed behavior, such	nis site. ty/viability (site + popu riculture		☑ Fair ☐ Poor

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 Na	ative Spec	ies Field Survey Form	Send Form
Scientific Name: Cathartes aura			
Common Name: Turkey vulture			
Species Found?  Yes No  If not, why?  Total No. Individuals Common  Subsequent Visit?  Is this an existing NDDB occurrence?  Yes, Occ. #  Collection? If yes:  Number  Museum / Her	gyes ∏no ☑no ☐unk.	Reporter: Gerry Scheid  Address: 1927 Fifth Avenue San Diego, Ca 92101-2358  E-mail Address: gscheid@recone  Phone: (619) 308-9333	environmental.com
Plant Information	Animal Informa	tion	
Phenology:%%% vegetative flowering fruiting	# adults  wintering b	0 0 0	egg masses # unknown burrow site other
Location Description (please attach map Located within the Lilac Hill Ranch project south and west the east, downtown Escondido 16 miles to the south, and In	of West Lilac Road terstate 15 and Old	with State Route 76 to the north, downtow Highway 395 to the west.	n Valley Center 10 miles to
County: San Diego  Quad Name: Bonsall	Land	downer / Mgr.: <u>ACCRETIVE INVESTN</u> Elevatio	
T R Sec	dian: H□ M□ S□ 884 □	GPS Make & Model	meters/fee
Habitat Description (plants & animals) plant com Animal Behavior (Describe observed behavior, such as to This species was commonly observed flying over the s	munities, dominants erritoriality, foraging,	s, associates, substrates/soils, aspects/slope singing, calling, copulating, perching, roostin	e: ng, etc., especially for avifauna):
Please fill out separate form for other rare taxa seen at this sit  Site Information Overall site/occurrence quality/via		ılation): ☐ Excellent ☑ Good	□Fair □ Poor
Immediate AND surrounding land use: Agriculture			
Visible disturbances: Fuel management zones and agricult	ure		
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):		Photographs: (check one Plant / animal Habitat Diagnostic feature	or more) Slide Print Digita

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

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

Reset California Na	ative Speci	ies Field Survey Form	Send Form
Scientific Name: Elanus leucurus			
Common Name: White-tailed kite			
Species Found?  Yes No  If not, why:  Total No. Individuals  2 Subsequent Visit?  Is this an existing NDDB occurrence?  Yes, Occ. #  Collection? If yes:  Number  Museum / Her	□yes □ no ☑no □ unk.	Reporter: Gerry Scheid  Address: 1927 Fifth Avenue San Diego, Ca 92101-2358  E-mail Address: gscheid@reconeny Phone: (619) 308-9333	/ironmental.com
Plant Information	Animal Informat	tion	
Phenology:%%% ruiting	# adults  wintering bi		masses # unknown
Location Description (please attach map Located within the Lilac Hill Ranch project south and west the east, downtown Escondido 16 miles to the south, and In County: San Diego	of West Lilac Road terstate 15 and Old	with State Route 76 to the north, downtown	Valley Center 10 miles to
Quad Name: <u>Bonsall</u> 「 R Sec,¼ of¼, Meric	dian: HO MO SO		: nap & type):
F R Sec,1/4 of1/4, Meric	dian: H□ M□ S□	GPS Make & Model	
DATUM: NAD27 ☐ NAD83 ☑ WGS Coordinate System: UTM Zone 10 ☐ UTM Zone Coordinates: One individual at: 117deg. 7min. 31.9se One individual at: 117deg. 7min. 43.5se	ec. W; 33deg. 16m	Geographic (Latitude & Longitude) Inin. 35.6sec. N	meters/fee
Habitat Description (plants & animals) plant com Animal Behavior (Describe observed behavior, such as to Observed on-site near southern willow scrub and inter	erritoriality, foraging, nsive agriculture n	singing, calling, copulating, perching, roosting,	etc., especially for avifauna);
Site Information Overall site/occurrence quality/via	ability (site + popu	lation):	☐ Fair ☐ Poor
/isible disturbances: Fuel management zones and agricult	ure		
hreats: Agriculture and development			
Comments:			
Somments.			

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

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

	lative Spec	ies Field Survey Form	Send Form
Scientific Name: Accipiter cooperii	30		
Common Name: Cooper's hawk			
Species Found? 🛛 📗		Reporter: Gerry Scheid	
Yes No If not, w		Address: 1927 Fifth Avenue	
Total No. Individuals4 Subsequent Visit?		San Diego, Ca 92101-2358	
s this an existing NDDB occurrence?Yes, Occ. #	☑ no ☐ unk.	E-mail Address: gscheid@reconenviro	onmental.com
Collection? If yes:		Phone: (619) 308-9333	
Number Museum / H			
Plant Information	Animal Informa	tion	
Phenology:%%% wegetative flowering fruiting	# adults  Wintering	# juveniles # larvae # egg ma	
Located within the Lilac Hill Ranch project south and we the east, downtown Escondido 16 miles to the south, and County: San Diego	Interstate 15 and Old	Highway 395 to the west.  downer / Mgr.; ACCRETIVE INVESTMEN	TS, INC./JON RILLI
Quad Name: Bonsall			- 0. to >
F R Sec,¼ of¼, Me F R Sec, ¼ of¼, Me			
	GS84 □	Horizontal Accuracy	meters/fe
Coordinate System: UTM Zone 10 ☐ UTM Z			
Coordinates: One at: 117deg. 8 min. 13.7 sec. W; 3		ec. N. One at: 117deg. 8min. 23sec. W; 33cc. W. One at: 117deg. min. 35.9sec. W; 33c	
	ommunities dominant		
Habitat Description (plants & animals) plant of Animal Behavior (Describe observed behavior, such a Observed on-site in 4 seperate locations including so	s territoriality, foraging outhern coast live o	, singing, calling, copulating, perching, roosting, etc.	., especially for avifauna).
Animal Behavior (Describe observed behavior, such a Observed on-site in 4 seperate locations including so	s territoriality, foraging outhern coast live o	, singing, calling, copulating, perching, roosting, etc ak riparian woodland, and an orchard.	c., especially for avifauna)
Animal Behavior (Describe observed behavior, such a Observed on-site in 4 seperate locations including so Please fill out separate form for other rare taxa seen at this Site Information Overall site/occurrence quality.	s territoriality, foraging outhern coast live o	, singing, calling, copulating, perching, roosting, etc ak riparian woodland, and an orchard.	
Animal Behavior (Describe observed behavior, such a Observed on-site in 4 seperate locations including so Please fill out separate form for other rare taxa seen at this Site Information Overall site/occurrence quality/mmediate AND surrounding land use: Agriculture	s territoriality, foraging outhern coast live o site.	, singing, calling, copulating, perching, roosting, etc ak riparian woodland, and an orchard.	
Animal Behavior (Describe observed behavior, such a Observed on-site in 4 seperate locations including so Please fill out separate form for other rare taxa seen at this   Site Information Overall site/occurrence quality/ mmediate AND surrounding land use: Agriculture  Visible disturbances: Fuel management zones and agriculture	s territoriality, foraging outhern coast live o site.	, singing, calling, copulating, perching, roosting, etc ak riparian woodland, and an orchard.	
Animal Behavior (Describe observed behavior, such a Observed on-site in 4 seperate locations including so Please fill out separate form for other rare taxa seen at this Site Information Overall site/occurrence quality/mmediate AND surrounding land use: Agriculture //isible disturbances: Fuel management zones and agricultures: Agriculture and development	s territoriality, foraging outhern coast live o site.	, singing, calling, copulating, perching, roosting, etc ak riparian woodland, and an orchard.	
Animal Behavior (Describe observed behavior, such a Observed on-site in 4 seperate locations including some please fill out separate form for other rare taxa seen at this Site Information Overall site/occurrence quality/mmediate AND surrounding land use: Agriculture visible disturbances: Fuel management zones and agriculture and development Comments:  Determination: (check one or more, and fill in blanks)	s territoriality, foraging outhern coast live o site.	, singing, calling, copulating, perching, roosting, etc ak riparian woodland, and an orchard.  ulation): Excellent Good  Photographs: (check one or mo	□Fair □ Poor
Animal Behavior (Describe observed behavior, such a Observed on-site in 4 seperate locations including solutions for other rare taxa seen at this Site Information Overall site/occurrence quality/mmediate AND surrounding land use: Agriculture sisble disturbances: Fuel management zones and agriculture and development comments:  Determination: (check one or more, and fill in blanks)  Keyed (cite reference):	s territoriality, foraging outhern coast live o site. /viability (site + popu	, singing, calling, copulating, perching, roosting, etc ak riparian woodland, and an orchard. ulation): Excellent Good	□ Fair □ Poor
Animal Behavior (Describe observed behavior, such a Observed on-site in 4 seperate locations including so Observed on-site in 4 separate locations including so Observed on-site in 4 separate locations including so Observed on-site in 4 separate locations in 4 separate l	s territoriality, foraging outhern coast live o site. Viability (site + popu	ak riparian woodland, and an orchard.    January	□ Fair □ Poor

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

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

Reset California Na	tive Spec	ies Field Survey Form	Send Form
Scientific Name: Crotalus ruber			
Common Name: Red diamond rattlesnake			
Species Found?  Yes No  If not, why?  Total No. Individuals  Subsequent Visit?  Is this an existing NDDB occurrence?  Yes, Occ. #  Collection? If yes:  Number  Museum / Herb	no □ unk.	Reporter: Gerry Scheid  Address: 1927 Fifth Avenue San Diego, Ca 92101-2358  E-mail Address: gscheid@reconenviro  Phone: (619) 308-9333	nmental.com
Plant Information	Animal Informa	tion	
Phenology:%%	# adults  U wintering b	# juveniles # larvae # egg ma	
Located within the Lilac Hill Ranch project south and west of the east, downtown Escondido 16 miles to the south, and Intercontrol County:  San Diego  Quad Name: Bonsall  T R Sec, ¼ of ¼, Meridi  T R Sec, ¼ of ¼, Meridi  DATUM: NAD27	erstate 15 and Old  Lance  an: H□ M□ S□  an: H□ M□ S□  an: H□ M□ S□  an: H□ OR  an: W; 33 deg. 17  c. W; 33 deg. 17  munities, dominants rritoriality, foraging,	Highway 395 to the west.  downer / Mgr.: ACCRETIVE INVESTMENT  Elevation:  Source of Coordinates (GPS, topo. map GPS Make & Model Horizontal Accuracy  Geographic (Latitude & Longitude)   min. 32.1 sec. N min. 20.5 sec. N  s, associates, substrates/soils, aspects/slope: singing, calling, copulating, perching, roosting, etc.	rs, inc./jon rilling & type): meters/fee
Observed on-site near southern coast live oak riparian version of the coast live oak riparian version oak riparian versi	woodland, southe	ern mixed chaprral.	☐Fair ☐ Poor
Immediate AND surrounding land use: Agriculture Visible disturbances: Fuel management zones and agricultur Threats: Agriculture and development Comments:		папоп). 🗀 Ехсепент 🛂 6000	∟ran ∟ Poor
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):		Photographs: (check one or more Plant / animal Habitat Diagnostic feature	e) Slide Print Digita

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 Spec	ies Field Survey Form Send	Form
Scientific Name: Quercus engelmannii			
Common Name: Engelmann oak			
Species Found?  Yes No  If not, w  Total No. Individuals  Subsequent Visit?  Is this an existing NDDB occurrence?  Yes, Occ. #  Collection? If yes:  Number  Museum /	yes no unk.	Reporter: Gerry Scheid  Address: 1927 Fifth Avenue San Diego, Ca 92101-2358  E-mail Address: gscheid@reconenvironmental.com  Phone: (619) 308-9333	n
Plant Information	Animal Informa	tion	
Phenology: 100 % flowering fruiting fruiting	# adults wintering b		# unknown
Located within the Lilac Hill Ranch project south and we the east, downtown Escondido 16 miles to the south, and	est of West Lilac Road Interstate 15 and Old	out your choice of coordinates, below) with State Route 76 to the north, downtown Valley Center 10 Highway 395 to the west.  downer / Mgr.: ACCRETIVE INVESTMENTS, INC./JO	
County: San Diego Quad Name: Bonsall	Land	Elevation:	
		Source of Coordinates (GPS, topo. map & type):	
	eridian: H□ M□ S□ GS84 □	GPS Make & Model Horizontal Accuracy	
Coordinate System: UTM Zone 10 UTM Zoordinates: One individual at: 117 deg. 8 min. 14 Two individuals at: 117 deg. 8 min. 1	.4 sec. W; 33 deg. 1	7 min. 27.2 sec. N	
Habitat Description (plants & animals) plant of Animal Behavior (Describe observed behavior, such a Observed in the project area as individual trees in such a such	as territoriality, foraging, outhern coast live or	, singing, calling, copulating, perching, roosting, etc., especially fo	or avifauna):
Site Information Overall site/occurrence quality	/viability (site + popu	ulation): ☐ Excellent ☐ Good ☐ Fair	Poor
mmediate AND surrounding land use: Agriculture fisible disturbances: Fuel management zones and agric	sultura		
	untile		
Threats: Agriculture and development			
Comments:			

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

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

ative Speci	ies Field Survey Form	Send Form
beldingi		
l whiptail		
? ☐ yes ☐ no ☑ no ☐ unk.	Reporter: Gerry Scheid  Address: 1927 Fifth Avenue San Diego, Ca 92101-2358  E-mail Address: gscheid@recone Phone: (619) 308-9333	environmental.com
	tion	
# adults	# juveniles # larvae #	egg masses # unknown burrow site other
of West Lilac Road terstate 15 and Old	with State Route 76 to the north, downtow Highway 395 to the west.	n Valley Center 10 miles to
	Source of Coordinates (GPS, topo	
<b>684</b> ☐ ne 11 ☐ <i>OR</i> 3 deg. 17 min. 10.	Horizontal Accuracy  Geographic (Latitude & Longitude) [ 1 sec. N. One at 117 deg. 8 min. 12.2	meters/feet
territoriality, foraging,	singing, calling, copulating, perching, roostii	ng, etc., especially for avifauna):
ability (site + popu	ulation): Excellent	☐ Fair ☐ Poor
ture		
	beldingi I whiptail I wyes no I no I unk. I wintering I wint	Reporter: Gerry Scheid Address: 1927 Fifth Avenue San Diego, Ca 92101-2358 E-mail Address: gscheid@recone Phone: (619) 308-9333  Animal Information  # adults # juveniles # larvae # wintering breeding nesting rookery  AND/OR fill out your choice of coordinate of West Lilac Road with State Route 76 to the north, downtow terstate 15 and Old Highway 395 to the west.  Landowner / Mgr.: ACCRETIVE INVEST Elevation: High Might Signer Gers Make & Model Horizontal Accuracy Be 11 OR Geographic (Latitude & Longitude) Gers Make & Model Horizontal Accuracy Be 11 OR Geographic (Latitude & Longitude) Gers Sec. W; 33 deg. 17 min. 18.2 sec. N. One at 117 deg. 8 min. 12.2 sec. W; 33 deg. 17 min. 18.2 sec. N. One at 117 deg. 8 remunities, dominants, associates, substrates/soils, aspects/sloperritoriality, foraging, singing, calling, copulating, perching, roosting coastal sage scrub, southern mixed chaparral, and the sability (site + population): Excellent  Good

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

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

Reset California N	lative Spec	ies Field Survey Form	Send Form
Scientific Name: Cnemidophorus multisc	ultatus tigris		
Common Name: Coastal western whiptai	1		
Species Found?		Reporter: Gerry Scheid	
Yes No If not, wh	ny?	Address: 1927 Fifth Avenue	
Total No. Individuals Subsequent Visit?		San Diego, Ca 92101-2358	
s this an existing NDDB occurrence?	☑ no ☐ unk.	E-mail Address: gscheid@reconenvir	onmental.com
Collection? If yes:		Phone: (619) 308-9333	
Number Museum / H	lerbarium	1119101	
Plant Information	Animal Informa	tion	
Phenology:%%%% ruiting	# adults  wintering b	# juveniles # larvae # egg m	
Quad Name: Bonsall/Pala  R Sec, ¼ of ¼, Mer  R Sec, ¼ of ¼, Mer  DATUM: NAD27	ridian: H□ M□ S□ SS84 □ Cone 11 □ OR 17 min. I.6 sec. N  communities, dominants	Source of Coordinates (GPS, topo. ma GPS Make & Model Horizontal Accuracy Geographic (Latitude & Longitude)    s, associates, substrates/soils, aspects/slope:	meters/fe
Please fill out separate form for other rare taxa seen at this  Site Information Overall site/occurrence quality/ mmediate AND surrounding land use: Agriculture	viability (site + popu	ulation): ☐ Excellent ☑ Good	□ Fair □ Poor
/isible disturbances: Fuel management zones and agricu	andre		
hreats: Agriculture and development			
Theats. Agriculture and development			
Comments:		Photographs' (sheek one or m	ore) Slide Print Digit
Comments:  Determination: (check one or more, and fill in blanks)  Keyed (cite reference):		Photographs: (check one or me	
Comments:  Determination: (check one or more, and fill in blanks)  Keyed (cite reference):  Compared with specimen housed at:		Plant / animal Habitat	
Determination: (check one or more, and fill in blanks)  Keyed (cite reference):		Plant / animal	

#### **ATTACHMENT 11**

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

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Scientific Name / Common Name Hermes copper Lycaena hermes	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List FSC/ County Group 1	Habitat Preference / Requirements Chaparral and coastal sage scrub where host plant spiny redberry ( <i>Rhamnus crocea</i> ) occurs. Adult emergence late May to July.	Verified On-site / Evidence Not observed.	Potential to Occur On-site Moderate	Factual Basis for Determination of Occurrence Potential Host plant spiny redberry present on-site associated with California buckwheat ( <i>Eriogonum</i> 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 <u>Anaxyrus <del>Bufo</del></u> 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.

RECON Page 1

Scientific Name / Common Name Southern Pacific pond turtle Actinemys [=Clemmys] marmorata pallida	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List FSC/CSC County: Group 1	Habitat Preference / Requirements Ponds, small lakes, marshes, slow- moving, sometimes brackish water.	Verified On-site / Evidence Not observed.	Potential to Occur On-site Moderate	Factual Basis for Determination of Occurrence Potential 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 <del>western whiptail</del> <u>Aspidoscelis tigris</u> <u>stejnegeriCnemidophoru</u> <del>s multiscultatus tigris</del>	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.

Page 2 RECON

## ATTACHMENT 11 SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA (continued)

Scientific Name /	Sensitivity Code & Status* (Federal/State) County Sensitive	Habitat Preference /	Verified On-site /	Potential to Occur	Factual Basis for Determination of
Common Name	Animal List	Requirements	Evidence	On-site	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 lxobrychus 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 onsite. Nearby historic occurrence was at an artificial lake.
Cooper's hawk (nesting) Accipiter cooperii	CSCWL 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.

RECON Page 3

Scientific Name / Common Name Sharp-shinned hawk (nesting) Accipiter striatus velox	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List CSC County: Group 1	Habitat Preference / Requirements Open deciduous woodlands, forests, edges, parks,	Verified On-site / Evidence Not observed.	Potential to Occur On-site Moderate	Factual Basis for Determination of Occurrence Potential Although not observed, suitable habitat for this species is present on-
		residential areas. Migrant and winter visitor.			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.

Page 4 RECON

## ATTACHMENT 11 SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA (continued)

		1		T	
Scientific Name / Common Name Western burrowing owl	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List FSC/CSC	Habitat Preference / Requirements Grassland,	Verified On-site / Evidence Not observed.	Potential to Occur On-site Low	Factual Basis for Determination of Occurrence Potential Habitat assessment
(burrow sites) Athene cunicularia hypugaea	County: Group 1	agricultural land, coastal dunes. Require rodent burrows. Declining resident.			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 Iudovicianus	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 onsite, protocol surveys failed to detect this species.

**RECON** 

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 <i>Opuntia</i> thickets. Rare localized resident.	Not observed.	Low	Suitable habitat for this species is not present onsite. Cactus patches observed on-site were predominately non-native Indian-fig ( <i>Opuntia ficus-indica</i> ), 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) <u>Setophaga [=</u> 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.

Page 6 RECON

## 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.

Scientific Name / Common Name Pallid bat Antrozous pallidus	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List CSC County: Group 2	Habitat Preference / Requirements Arid deserts and grasslands. Shallow caves, crevices, rock outcrops, buildings, tree cavities. Especially near water. Colonial. Audible echolocation signal.	Verified On-site / Evidence Not observed.	Potential to Occur On-site Low	Factual Basis for Determination of Occurrence Potential 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.

Page 8 RECON

## ATTACHMENT 11 SENSITIVE WILDLIFE SPECIES OBSERVED OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA (continued)

	Sensitivity Code & Status* (Federal/State)				Factual Basis for
Scientific Name /	County Sensitive	Habitat Preference /	Verified On-site /	Potential to Occur	Determination of
Common Name	Animal List	Requirements	Evidence	On-site	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.	Not observed.	Low	Some suitable habitat occurs on-site for this species; however, project site may be outside of the preferred geographical
Western yellow bat Lasiurus xanthunus		Colonial. Migratory.  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	Not observed.	Low	range for this species.  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	trees.  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.

	Sensitivity Code & Status* (Federal/State)				Factual Basis for
Scientific Name /	County Sensitive	Habitat Preference /	Verified On-site /	Potential to Occur	Determination of
Common Name	Animal List	Requirements	Evidence	On-site	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.

Page 10 RECON

## 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, agricultural 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.

RECON Page 11

Scientific Name / Common Name Northwestern San Diego pocket mouse Chaetodipus fallax fallax	Sensitivity Code & Status* (Federal/State) County Sensitive Animal List FSC/CSC County: Group 2	Habitat Preference / Requirements San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.	Verified On-site / Evidence Not observed.	Potential to Occur On-site Low	Factual Basis for Determination of Occurrence Potential 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 onsite 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.

Page 12 RECON

#### 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.

<sup>\*</sup>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.

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Page 14 RECON

#### **ATTACHMENT 12**

Jurisdictional/Wetland Delineation Report for the Lilac Hills Ranch Specific Plan and General Plan Amendment Area, Escondido, California THIS PAGE IS INTENTIONALLY BLANK.

# 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 RECON ENVIRONMENTAL. INC.

1927 FIFTH AVENUE SAN DIEGO, CA 92101

619-308-9333

September 10, 2012

#### **TABLE OF CONTENTS**

1.0	Sur	Summary of Findings						
2.0	Intr	Introduction						
3.0	Met	2						
	3.1	U.S. Army Corps of Engineers	2					
		<ul> <li>3.1.1 Regulatory Definition</li> <li>3.1.2 Isolated Waters</li> <li>3.1.3 Wetland Parameters</li> <li>3.1.4 Non-wetland Jurisdictional Waters</li> <li>3.1.5 Atypical Situations</li> </ul>	6 6 7 10 10					
	3.2	CDFG and RWQCB	11					
	3.3	County of San Diego	11					
4.0	Res	12						
	4.1	Vegetation	12					
		<ul><li>4.1.1 Areas with Hydrophytic Vegetation</li><li>4.1.2 Areas Lacking Hydrophytic Vegetation</li></ul>	15 15					
	4.2	Soils	16					
	4.3	Hydrology	16					
5.0	Loc	17						
	5.1	USACE Jurisdictional Waters	17					
		<ul><li>5.1.1 Non-wetland Waters of the U.S.</li><li>5.1.2 Wetland Waters of the U.S.</li></ul>	17 18					
	5.2	CDFG/RWQCB Waters of the State	18					
	5.3	County of San Diego RPO Wetlands	18					
6.0	Reg	Regulatory Issues 3						
7.0	References Cited 32							

#### **TABLE OF CONTENTS (CONT.)**

#### **FIGURES**

1:	Regional Location	3
2:	Project Location on USGS Map	4
3:	Project Location on Aerial Photograph	5
4:	Vegetation Communities and Land Cover Types	13
5a:	Location of USACE Waters of the U.S.	19
5b:	Location of USACE Waters of the U.S.	21
6a:	Location of CDFG/RWQCB State Waters	23
6b:	Location of CDFG/RWQCB State Waters	25
7a:	Location of County of San Diego RPO Wetlands	27
7b:	Location of County of San Diego RPO Wetlands	29
ТАВ	LES	
1:	Vegetation Communities and Land Cover Types	15
2:	Existing Jurisdictional Waters within the Project Area	17

#### **ATTACHMENTS**

1: Wetland Determination Forms

#### 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).

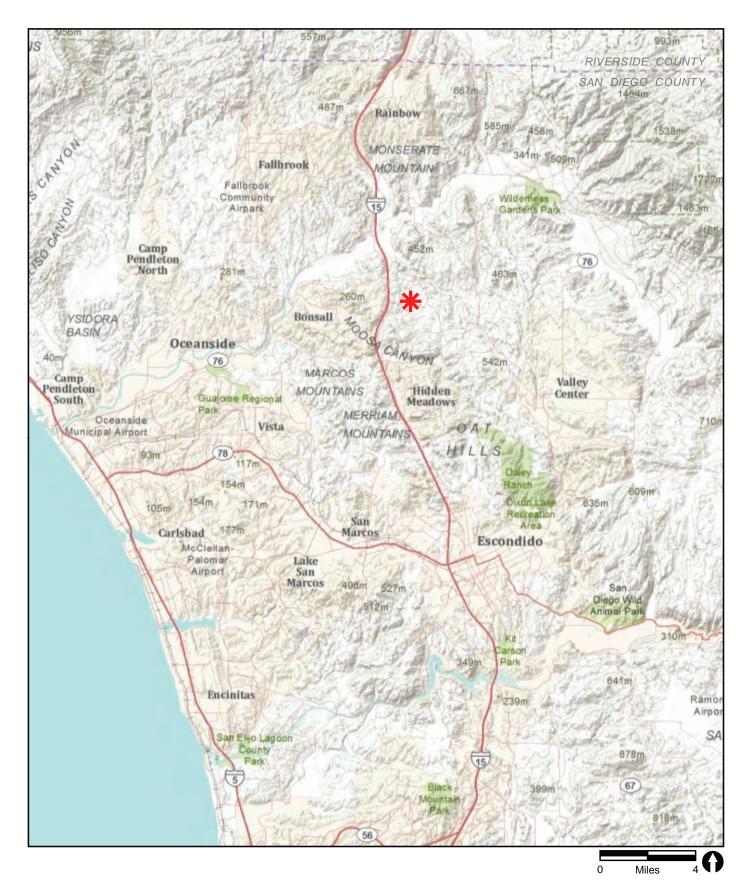
A total of 13.44 acres of jurisdictional USACE wetlands were delineated on the site that had the three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. An additional 4.69 acres of non-wetland waters of the U.S. were delineated on-site, and these non-wetland areas were 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.

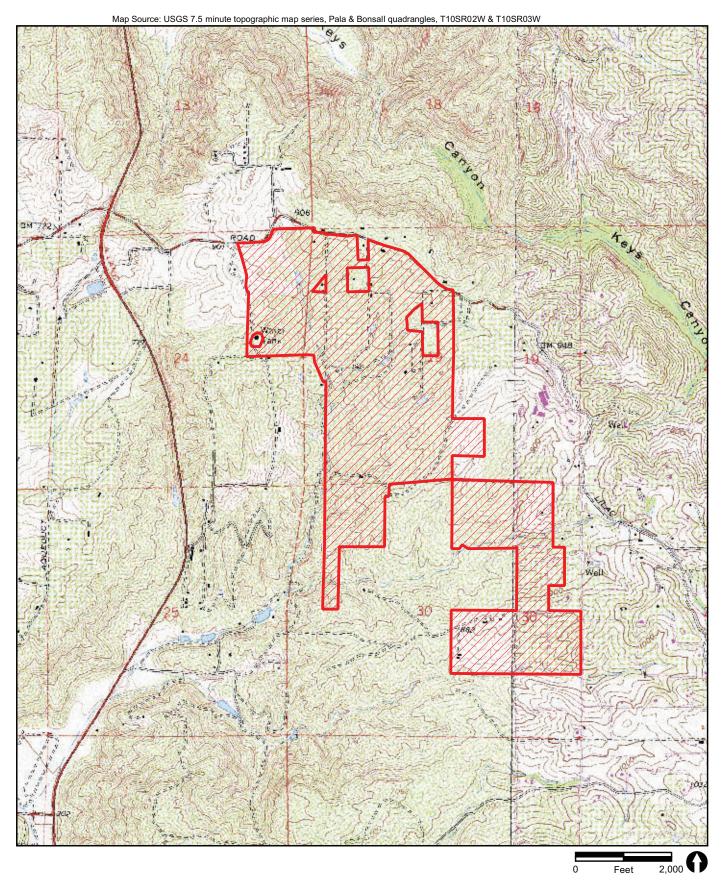
Impacts to jurisdictional waters, including any wetlands, on-site would require a 404 Permit from the USACE, a 1602 Streambed Alteration Agreement from CDFG, and a 401 Water Quality Certification from the RWQCB. Impacts to County RPO wetlands are to be avoided to the maximum extent possible, and any unavoidable impacts would require County approval and mitigation per County standards.

RECON Page 1



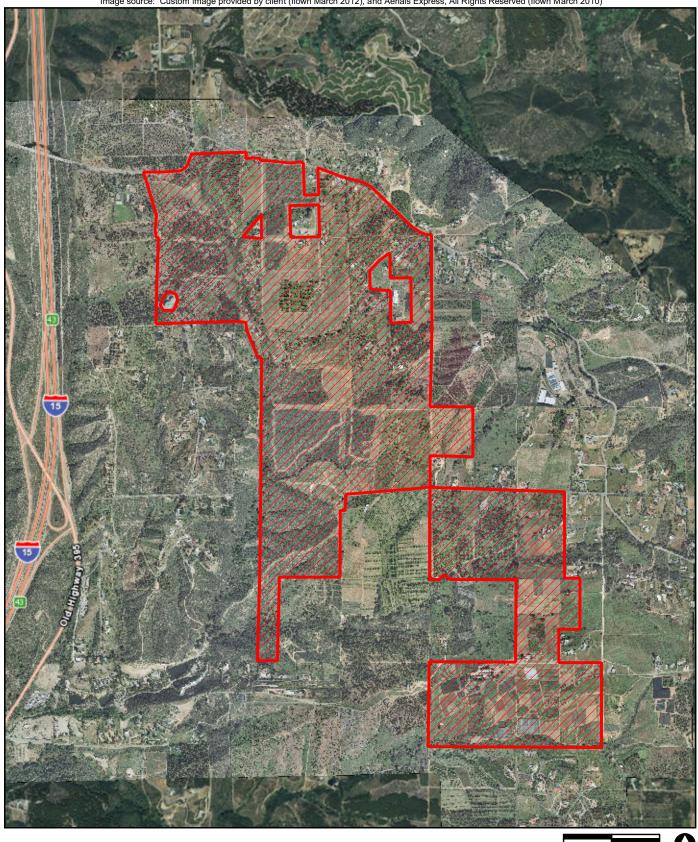


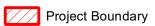














# 2.0 Introduction

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;

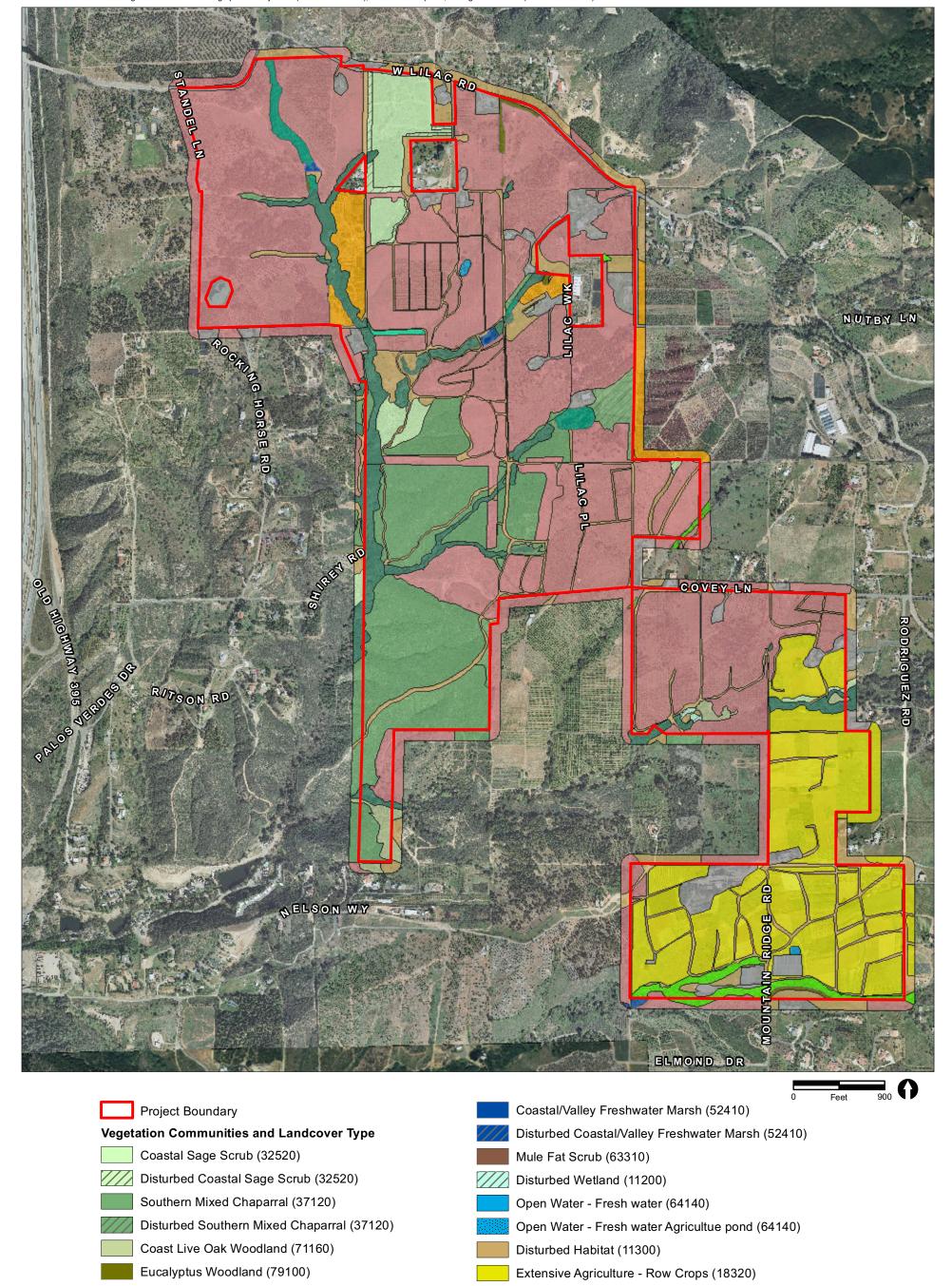
- (ii) Are small and geopraphically isolated from other wetland systems;
- (iii) Are not vernal pools; and,
- (iv) Do not have substantial or locally important populations of wetland dependent sensitive species.
- (bb). Lands that have been degraded by past legal land disturbance activities, to the point 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.



Intensive Agriculture - Nursery (18200)

Orchard (18100)

Vinyard (18100)

Developed (12000)

Southern Willow Scrub (63320)

Disturbed Southern Willow Scrub (63320)

Southern Willow Riparian Woodland (62500)

Southern Coast Live Oak Riparian Woodland (61310)

Dist. Southern Coast Live Oak Riparian Woodland (61310)

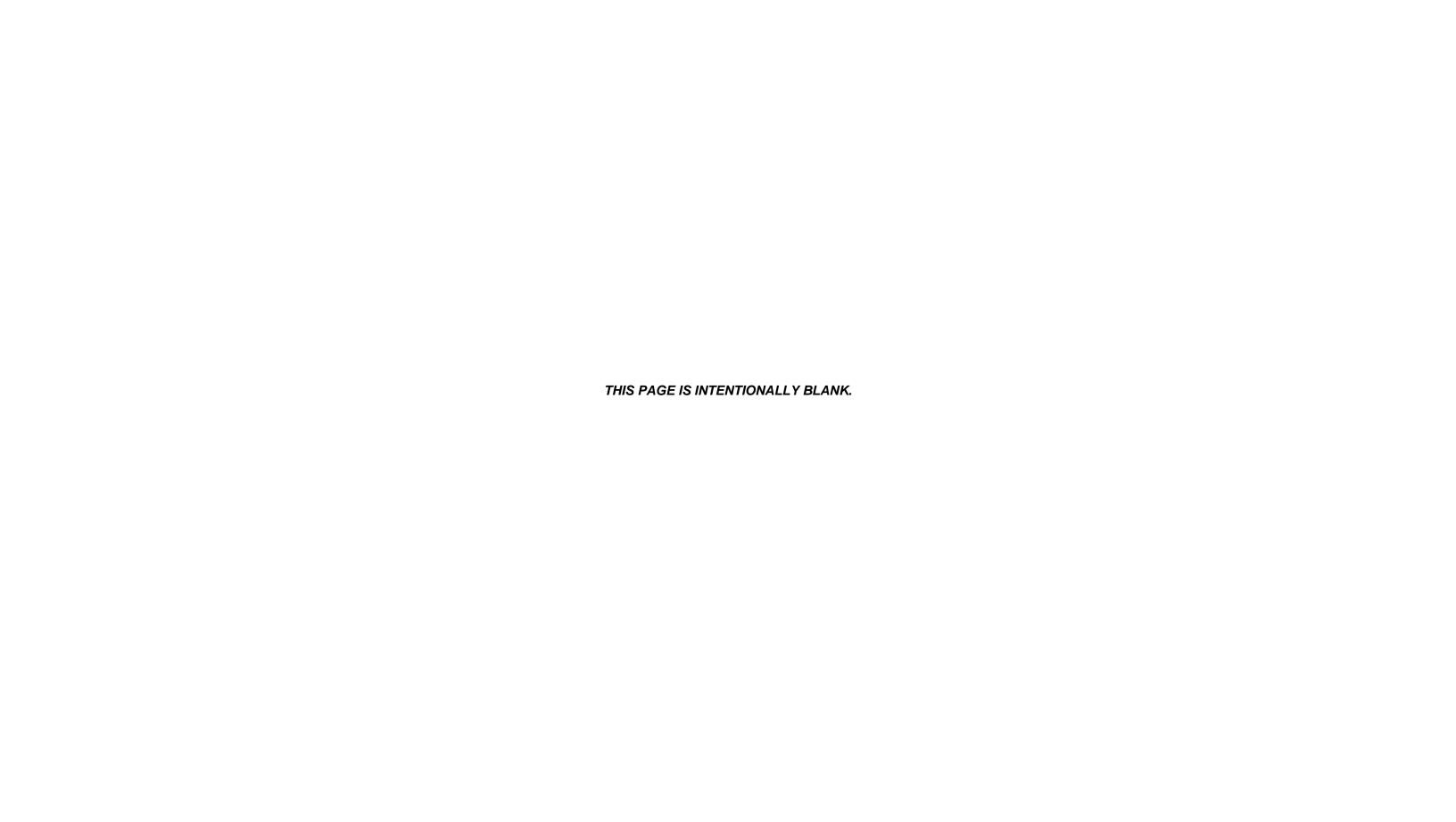


TABLE 1
EXISTING HABITAT / VEGETATION COMMUNITIES

Habitat / Vegetation Communities	Acres
Coast live oak woodland (71160)	3.58
0 1 (00500)	40.74
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
<b>USACE Total Jurisdiction</b>	18.13
CDFG/RWQCB Jurisdiction <sup>1</sup>	
Streambed	4.18
State Wetlands (Riparian habitat)	39.35
CDFG Total Jurisdiction <sup>1</sup>	43.52
County of San Diego RPO Wetlands	42.88

<sup>&</sup>lt;sup>1</sup>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.

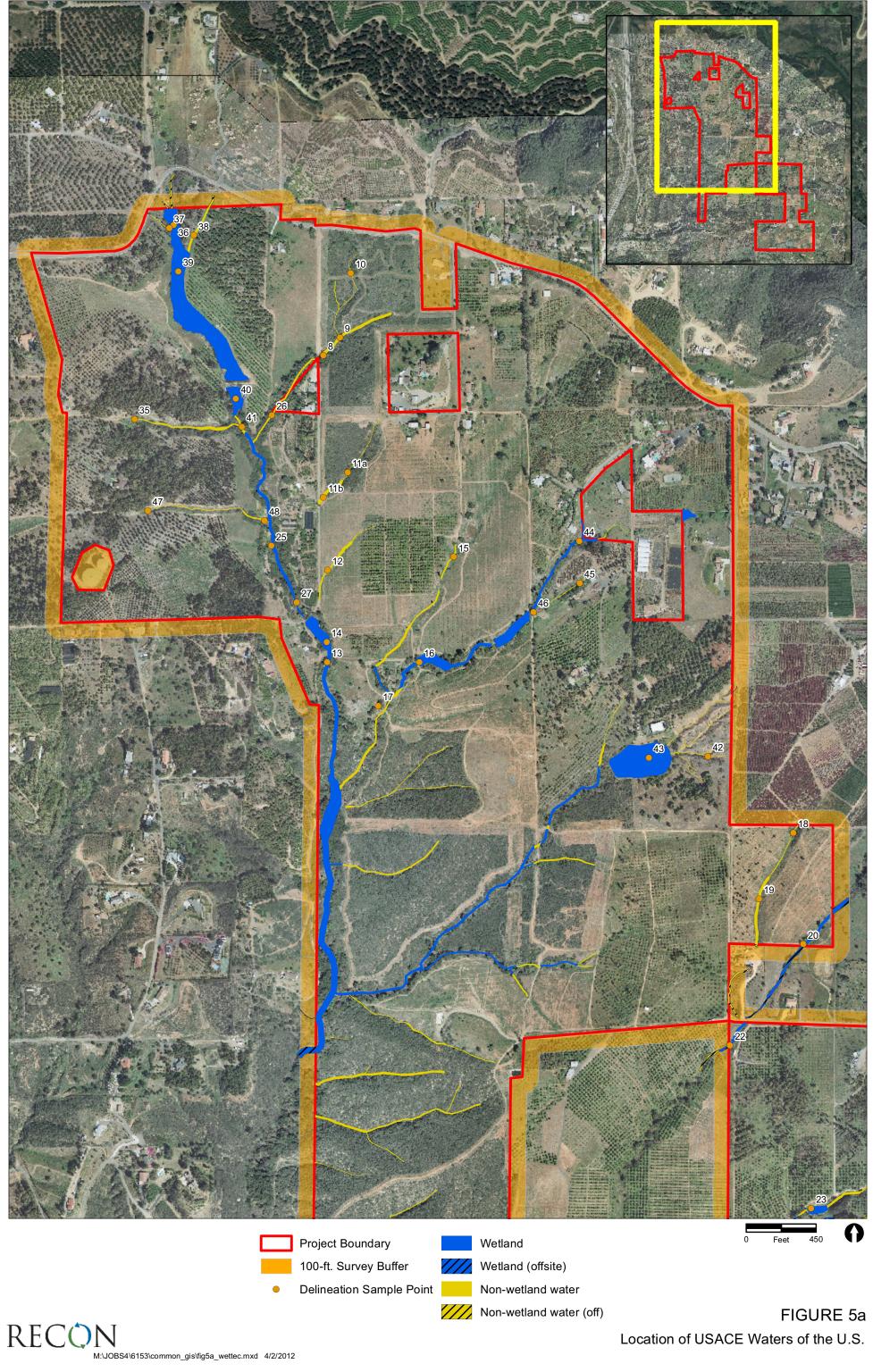
Portions of the southern coast live oak riparian woodlands, southern willow scrub, and freshwater marsh areas along the drainage courses on the site satisfy the three parameter criteria for USACE wetlands. Wetland waters of the U.S. on-site include all wetlands within the ordinary high water mark and 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).

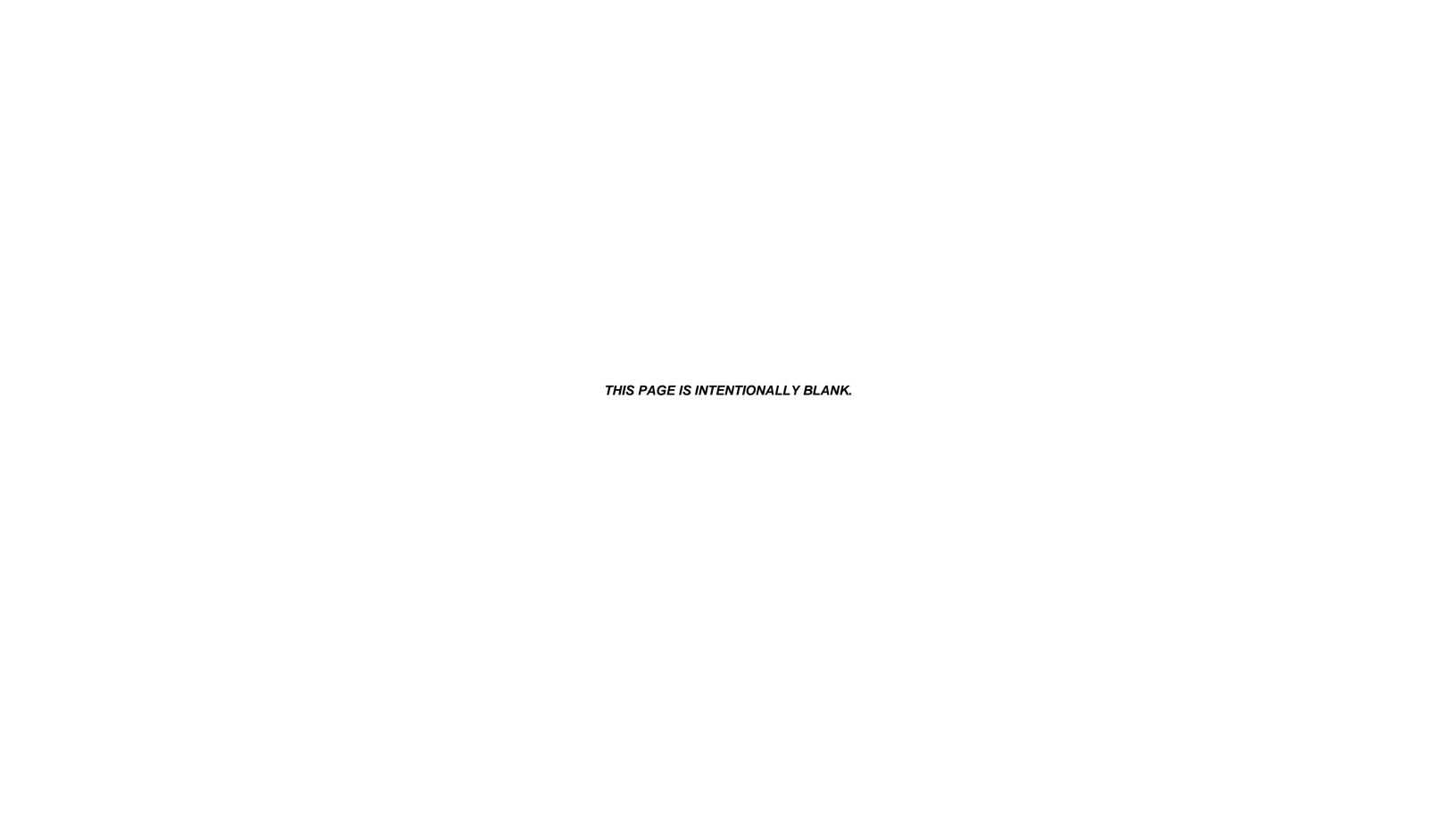
### 5.2 CDFG/RWQCB Waters of the State

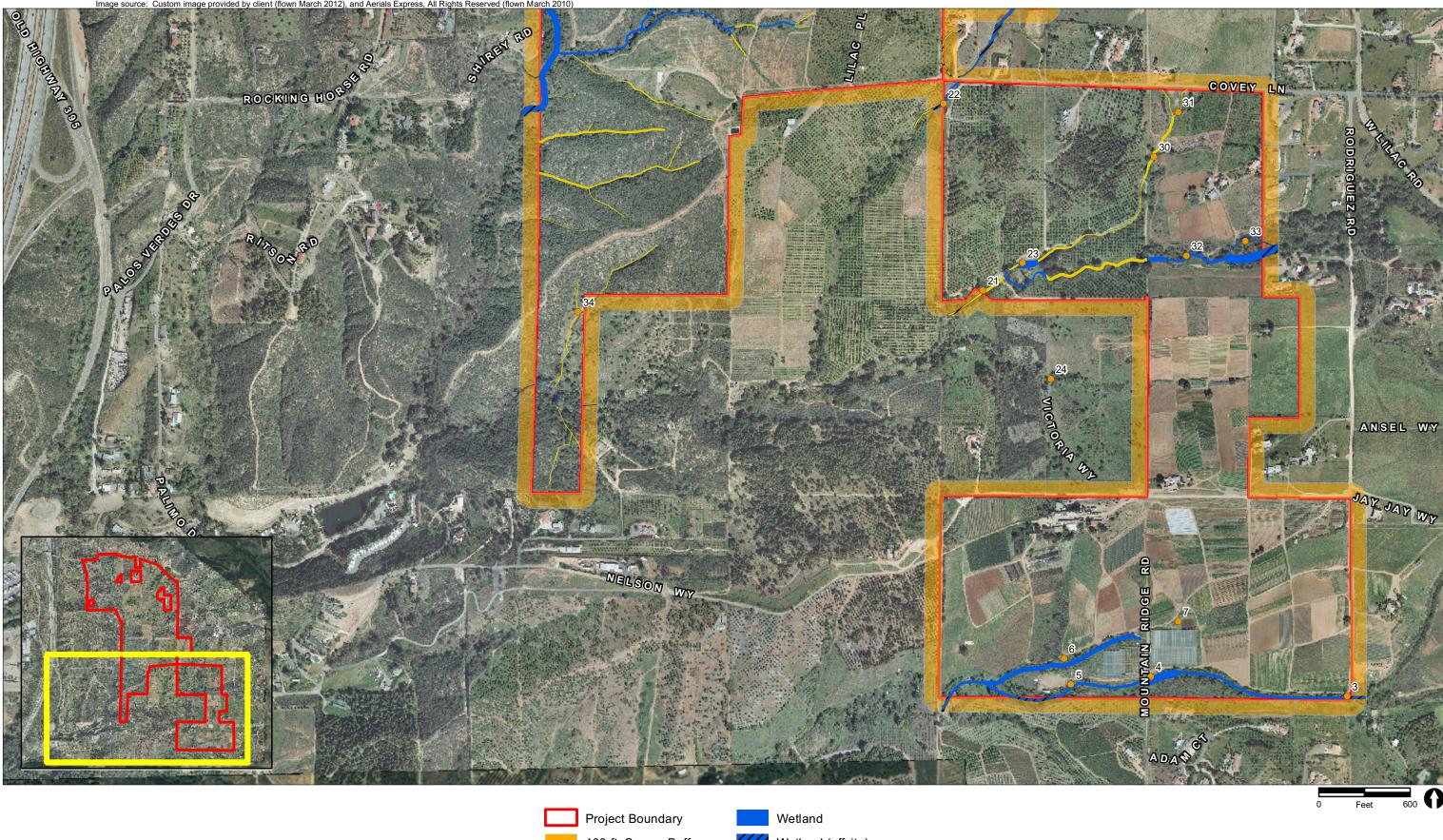
State waters under the jurisdiction CDFG/RWQCB on-site include both unvegetated or upland vegetated streambeds and wetlands (see Figures 6a and b). Streambeds delineated on-site include the ephemeral drainages that drain into the larger drainage courses, and total 4.18 acres. State wetlands on-site include 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.







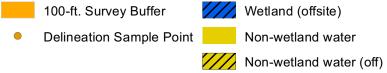
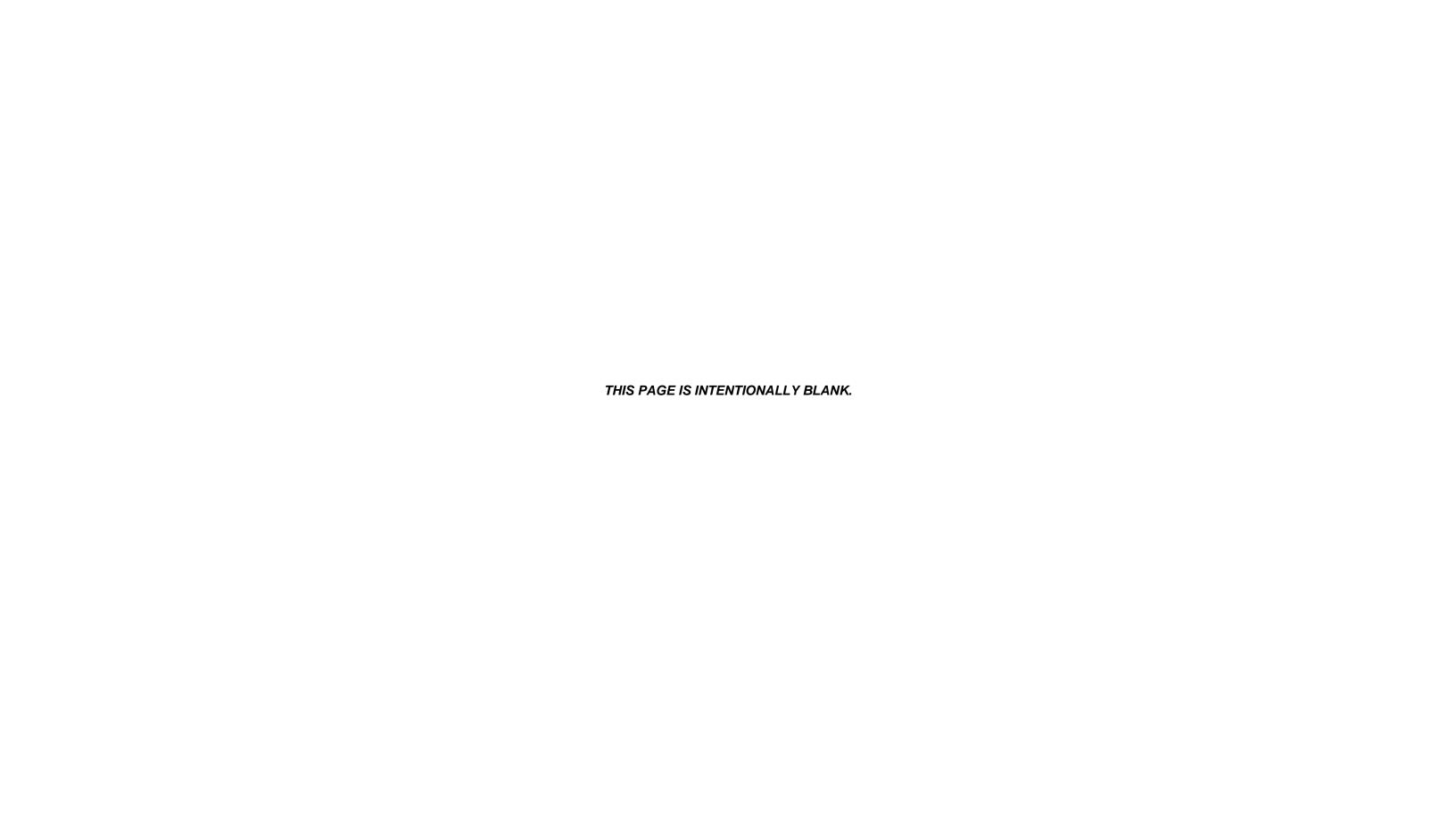
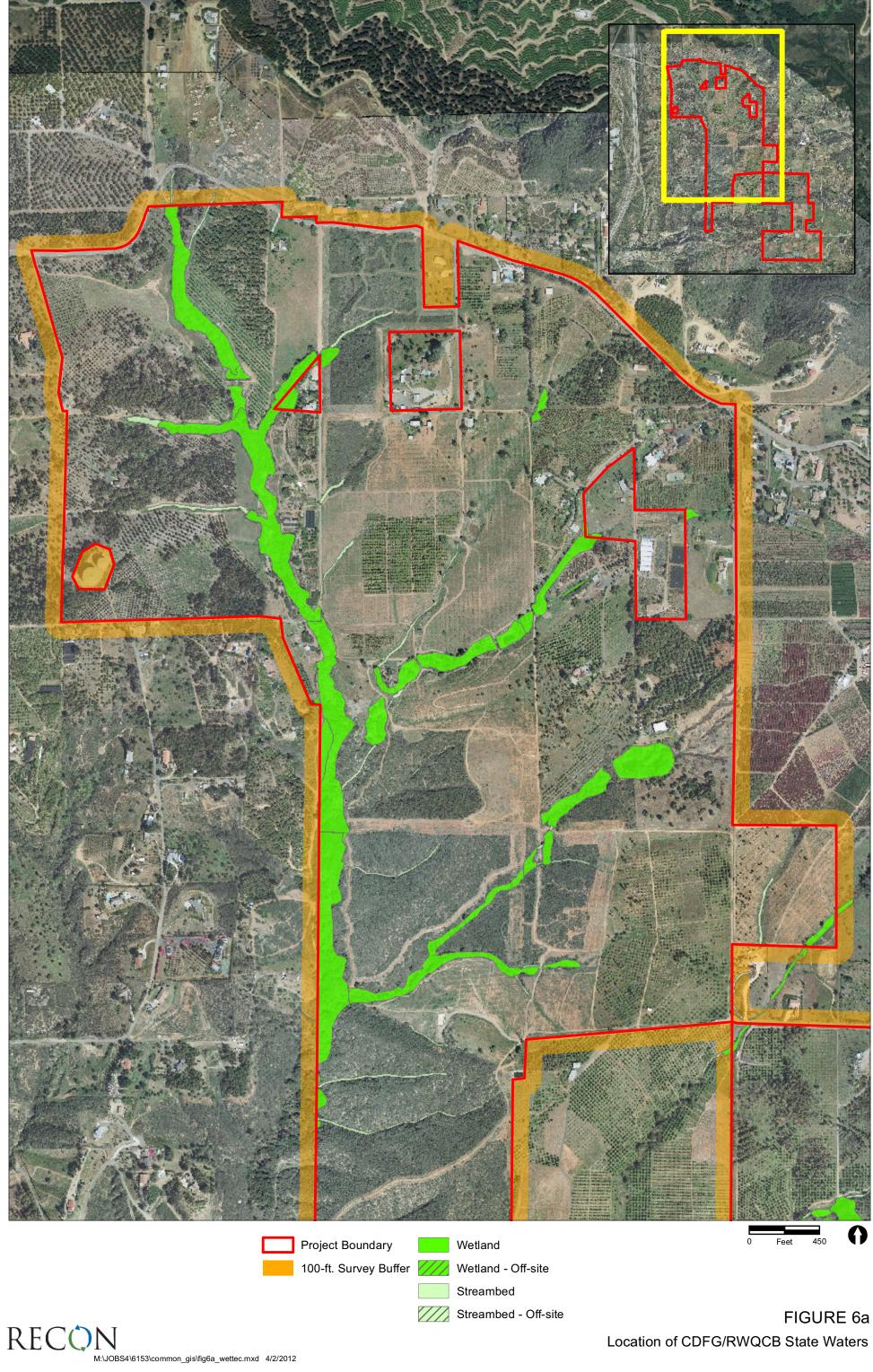
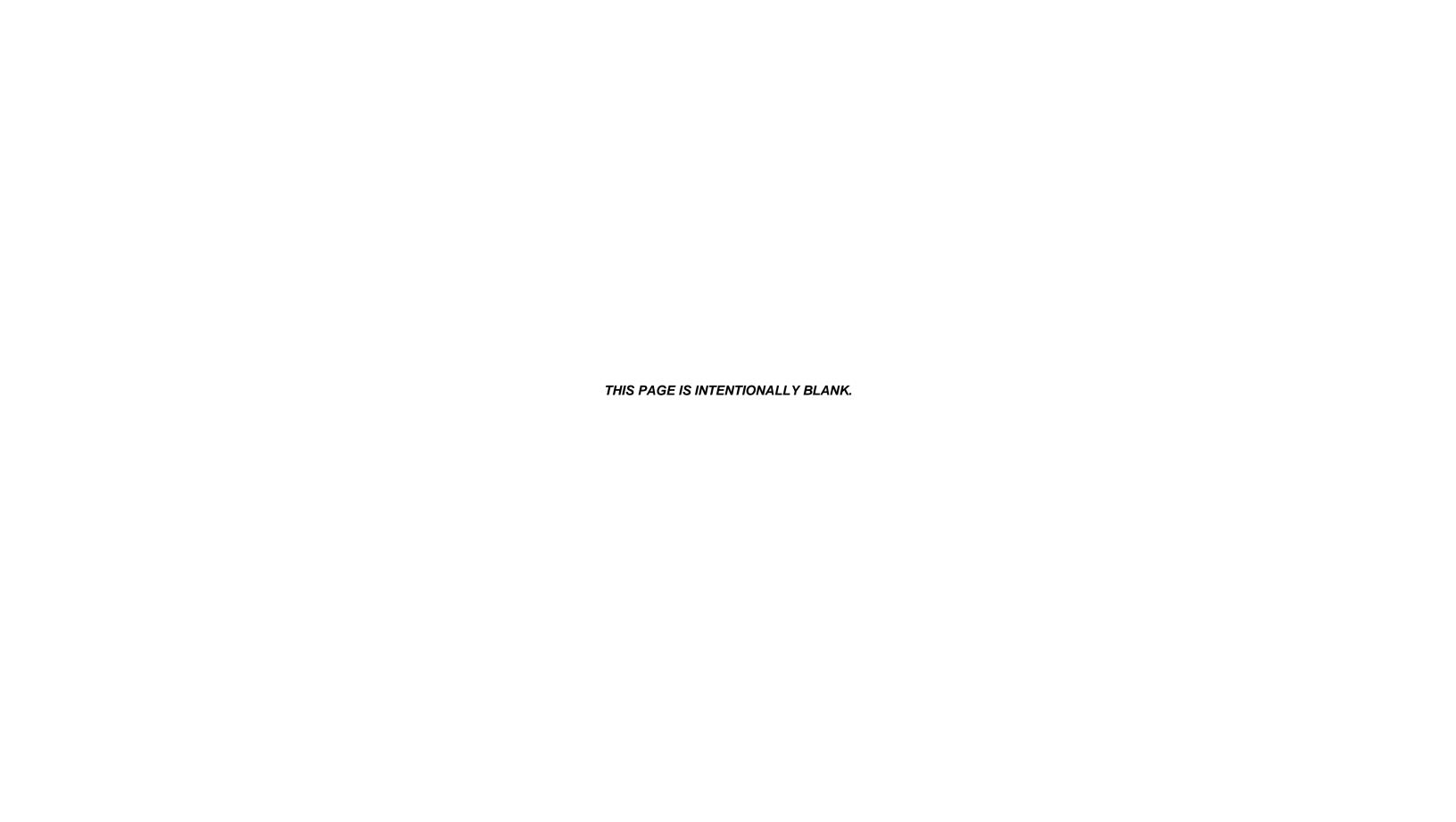
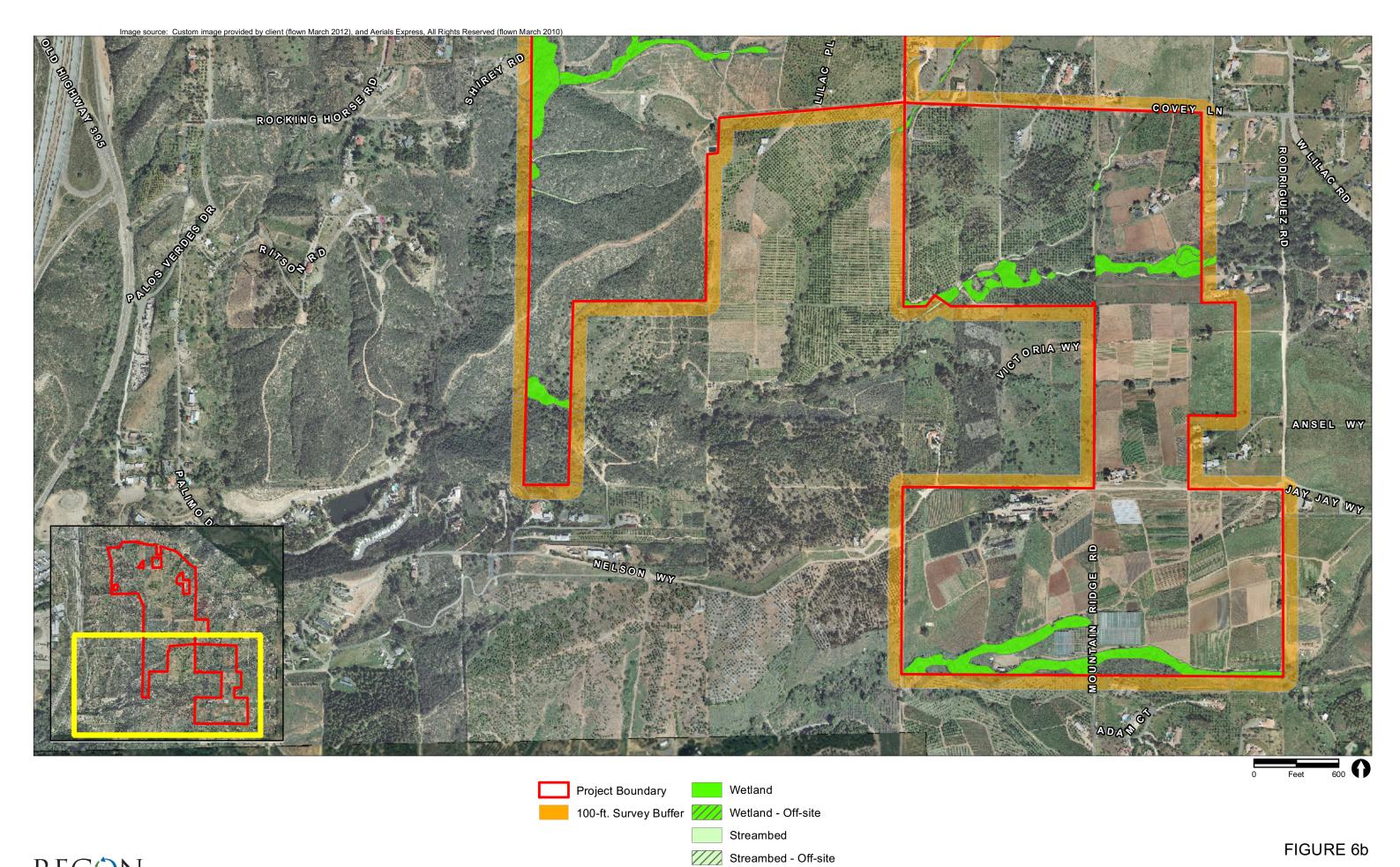


FIGURE 5b Location of USACE Waters of the U.S.



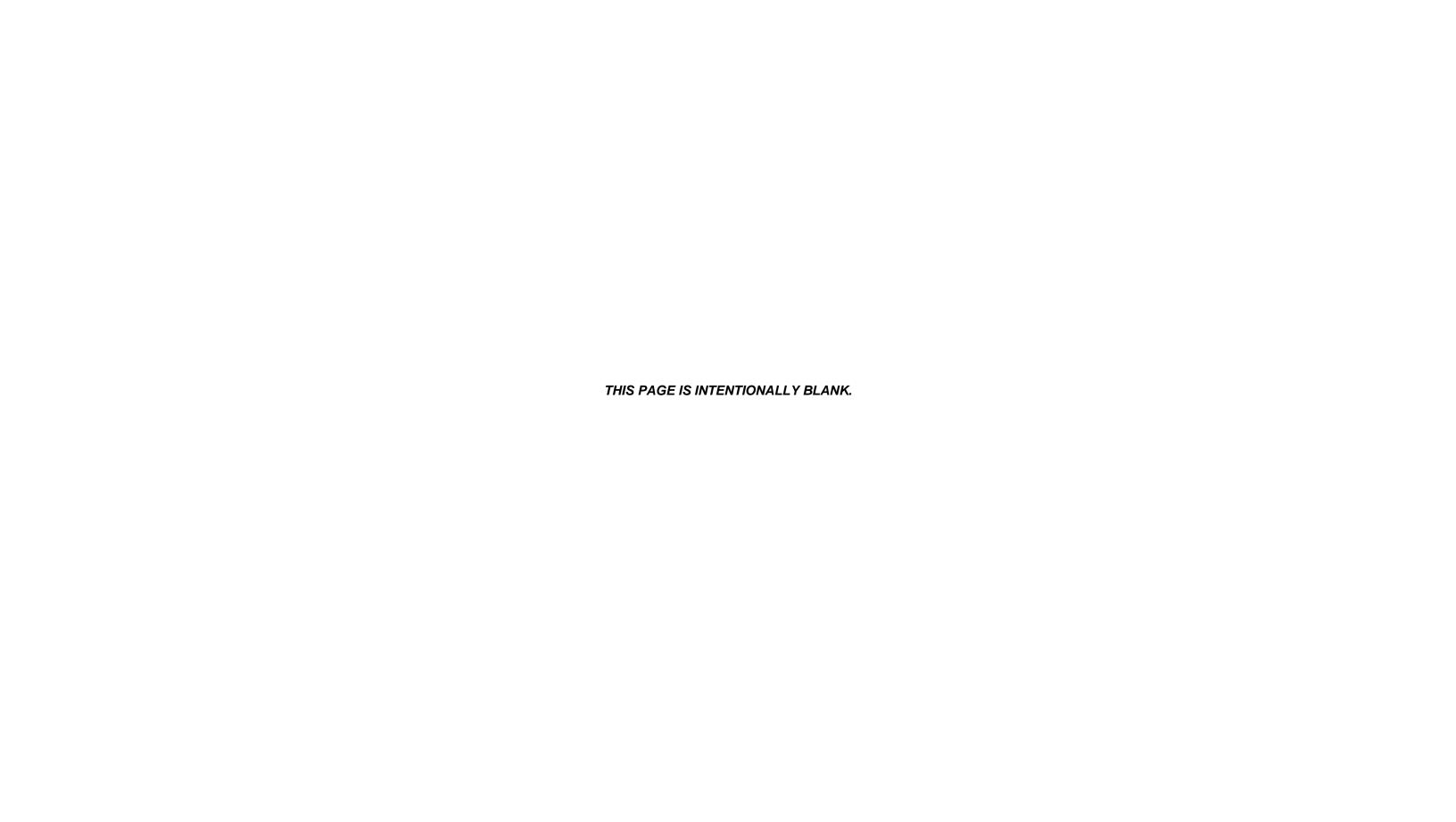


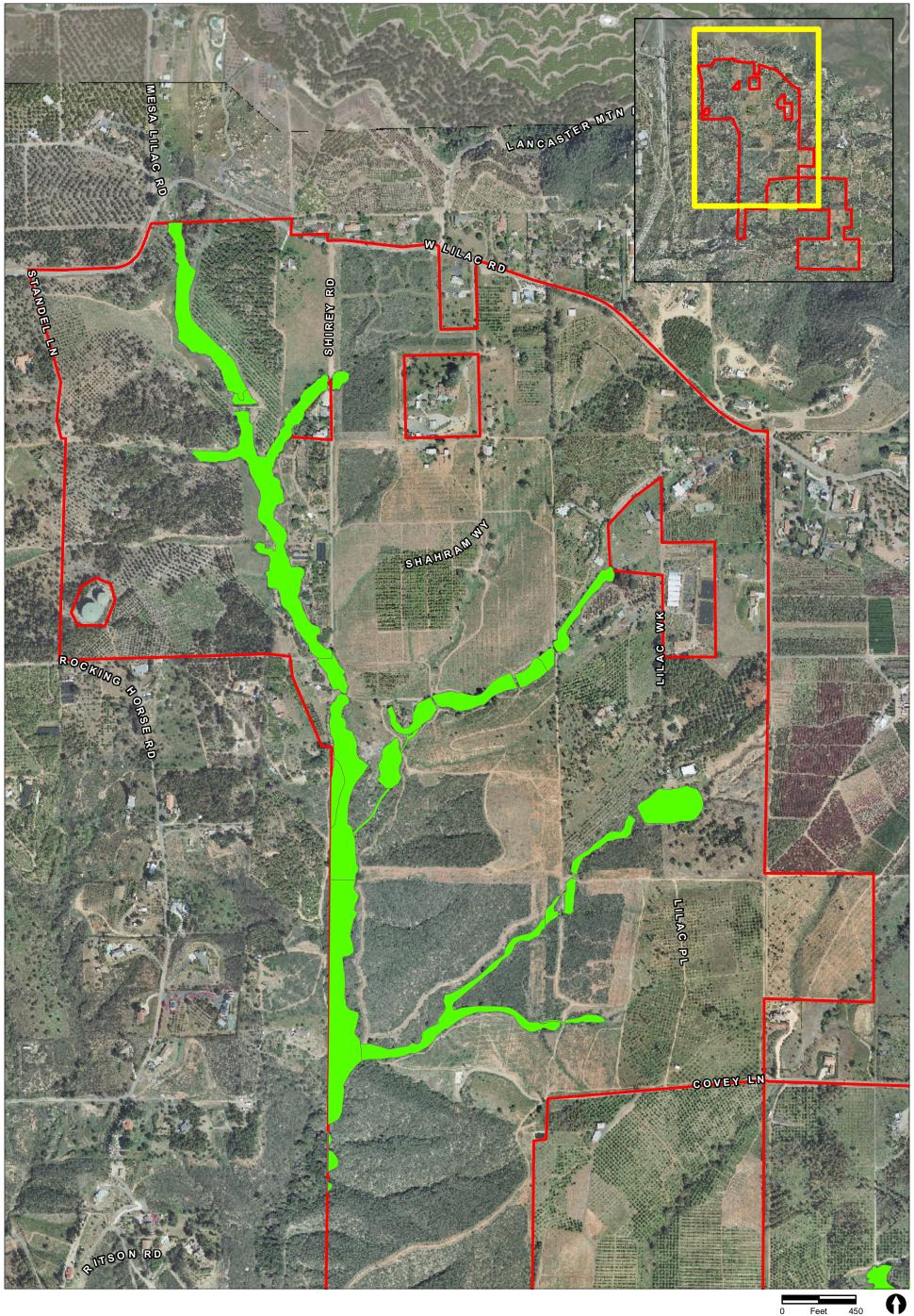




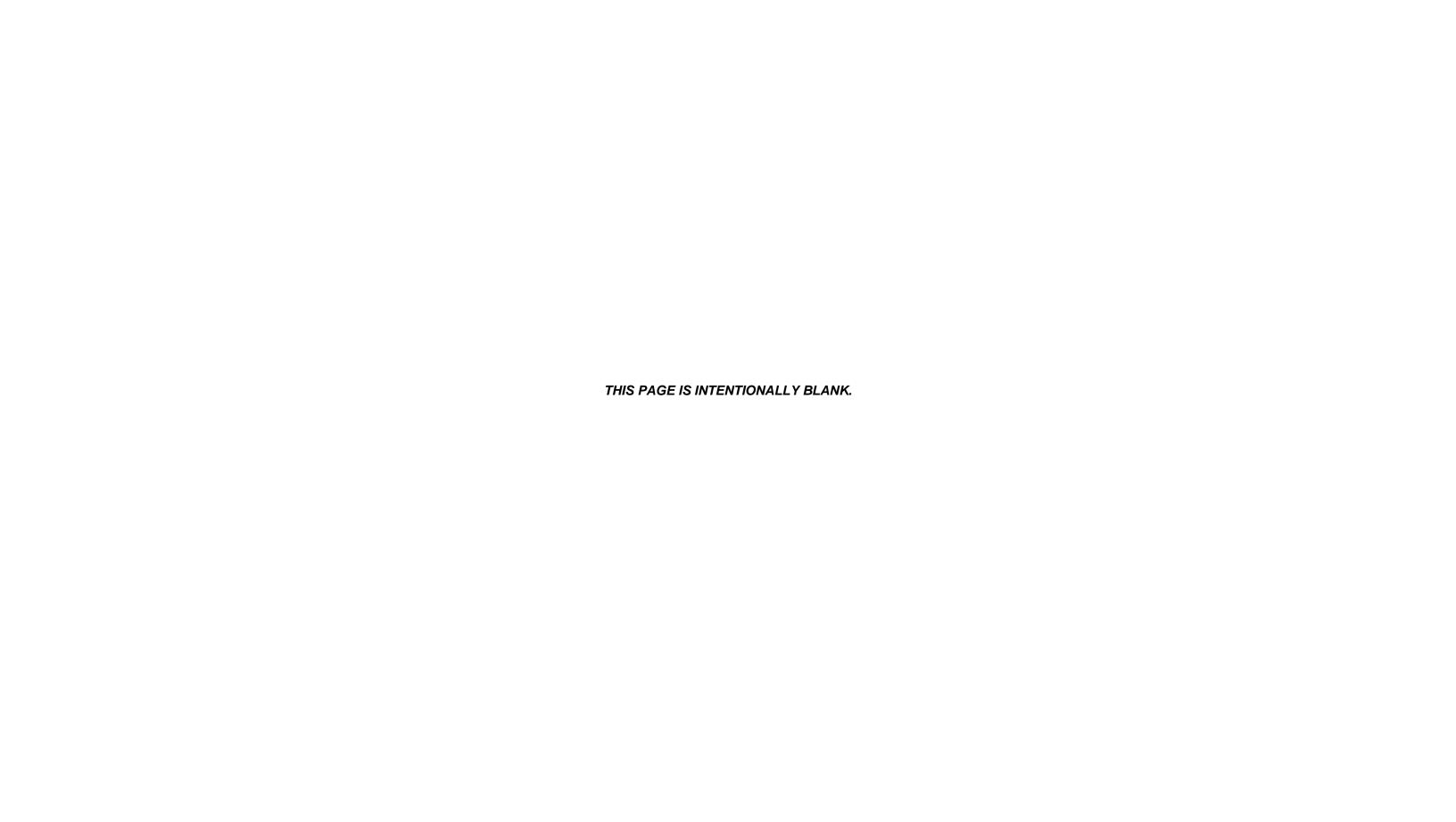
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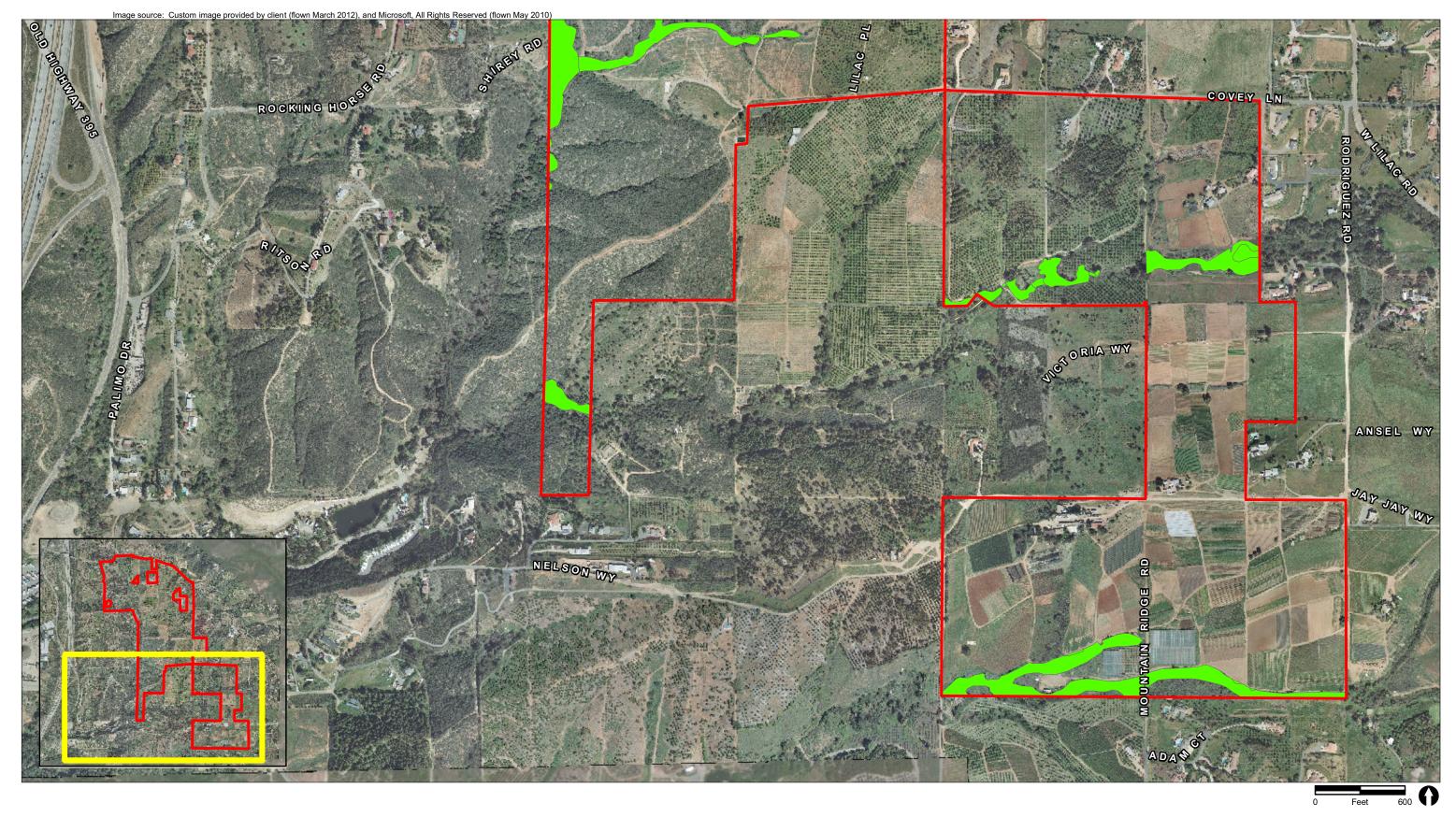
Location of CDFG/RWQCB State Waters











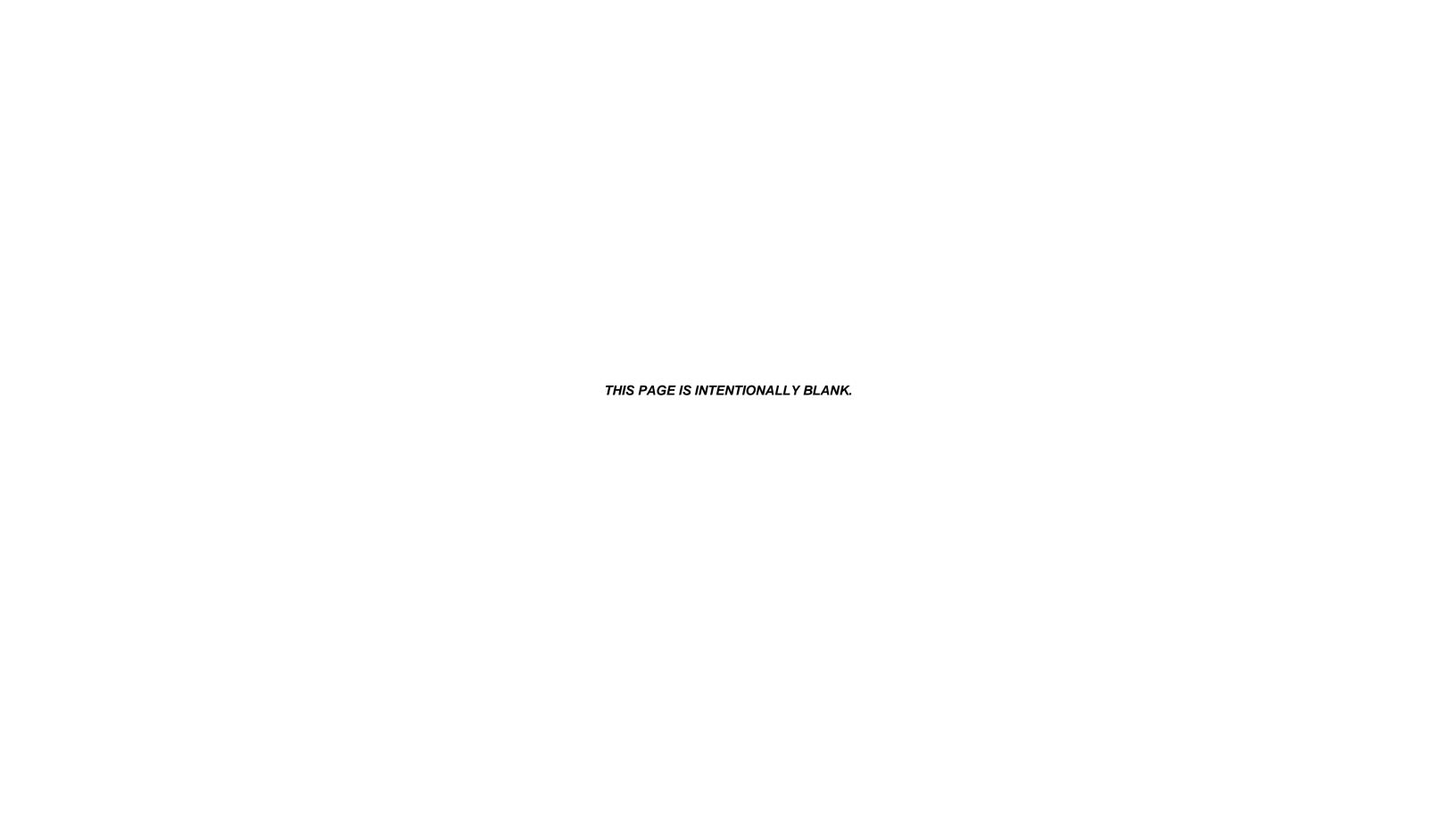


Project Boundary

County RPO Wetland

County RPO Wetland - Off-site

FIGURE 7b



# 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

vestigator(s): 6. Scheid: 51, McKin andform (hillslope, terrace, etc.): <u>Valley bother</u> abregion (LRR): LRZ-C	ere .	Local relief (conc	ave, convex, none): Cincauc	Slope (%):
oil Map Unit Name: Steep bulled land	1 inch	· lacate	de laces NWI classificat	tion:
e climatic / hydrologic conditions on the site typical for	this time of use	- Carrise San	No. (If no eveloir in Dev	morris )
		4		
e Vegetation, Soil, or Hydrology		4		
e Vegetation, Soil, or Hydrology	naturally pro	blematic?	(If needed, explain any answers	in Remarks.)
UMMARY OF FINDINGS – Attach site ma	ap showing	sampling po	int locations, transects,	important features, e
Hydric Soil Present?  Ves   Yes   Ye	No No	Is the Sam within a W		No
emarks:				
GETATION – Use scientific names of pl	lants.			
ree Stratum (Plot size:)	Absolute % Cover	Dominant Indica Species? Statu	10	Chief.
	90%		- Number of Dominant Spe	
Populas fremenita'	296	No FA	$\overline{\omega}$	
			Total Number of Dominar Species Across All Strata	2
	92%	= Total Cover	Percent of Dominant Spe That Are OBL, FACW, or	FAC: UL (A/
apling/Shrub Stratum (Plot size:)			The Court of the C	
Buchun saleifolia		yes FAC	Prevalence Index works	
			Total % Cover of:	
			OBL species	
			FAC species	
	- T. FT-CT-	= Total Cover	FACU species	
erb Stratum (Plot size:)			UPL species	
& (milk thistle) (Carduns sp.)	32	yes up		(A) (E
				B/A =
			Hydrophytic Vegetation	
			\( \times \) Dominance Test is >:	
			Prevalence Index is s	
			Morphological Adapta	ations <sup>1</sup> (Provide supporting or on a separate sheet)
-	26		Problematic Hydroph	confirmation of the state of th
/oody Vine Stratum (Plot size:)	7/0	= Total Cover		
y lot size.			<sup>1</sup> Indicators of hydric soil a	nd wetland hydrology must
			be present, unless disturb	ped or problematic.
	V.	= Total Cover	Hydrophytic	
Bare Ground in Herb Stratum 8 Co	over of Biotic Cr	1	Vegetation Present? Yes	X_ No
	over or profic Cr	uot —	riesent? Yes	/~NO
emarks:				

0	-	
-		

Histosol (A1)

Histic Epipedon (A2)

Hydrogen Sulfide (A4)

Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D)

Thick Dark Surface (A12)

Sandy Mucky Mineral (S1)

Sandy Gleyed Matrix (S4) Restrictive Layer (if present):

Depleted Below Dark Surface (A11)

Black Histic (A3)

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

Remarks: 0:- asme streaking; 0-2.m. organic (agar

rofile Desc	ription: (Describe	to the dep				or contir	m the absence of indic	ators.)
Depth	Matrix			x Feature		1 2	3 540-455	6
inches) 5 - 19"	107123/2	95	SYR6/8	5%	Type'	Loc	Sandy line	Remarks
							, <u> </u>	- Andrew Control of the Control of t
							. ——	~~~~
	-							

Indicators for Problematic Hydric Soils<sup>3</sup>:

\_\_ 1 cm Muck (A9) (LRR C)

\_\_ Reduced Vertic (F18)

Hydric Soil Present?

2 cm Muck (A10) (LRR B)

Red Parent Material (TF2)

Other (Explain in Remarks)

3Indicators of hydrophytic vegetation and

wetland hydrology must be present,

unless disturbed or problematic.

HYD	RO	LOGY	

Type:

Depth (inches):

Wetland Hydrology Indicators: Primary Indicators (minimum of one required	d: abook all that apply)	Secondary Indicators (2 or more required)
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 (B) Water-Stained Leaves (B9)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Science</li> </ul>	<ul> <li>Water Marks (B1) (Riverine)</li> <li>Sediment Deposits (B2) (Riverine)</li> <li>Drift Deposits (B3) (Riverine)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> </ul>
Water Table Present? Yes	No Depth (inches):  No Depth (inches):  No Depth (inches):  Onitoring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes X No
Remarks: Sheld flew; No ar	scerache low for chance	et; Flot brood allwiring

X Sandy Redox (S5)

\_\_ Stripped Matrix (S6)

X' Depleted Matrix (F3)

Vernal Pools (F9)

\_\_ Loamy Mucky Mineral (F1)

Loamy Gleyed Matrix (F2)

Redox Dark Surface (F6)

Redox Depressions (F8)

Depleted Dark Surface (F7)

### WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Las L. las	c	City/County: 51	) county sam	pling Date: 2/25///
Applicant/Owner: Accretive	44.00		State: <u>CA</u> Sam	pling Point: Z
nvestigator(s): 6. Scheid, E. Mc	Rinney S	Section, Township, Ra	inge:	
andform (hillslope, terrace, etc.):	11			
Subregion (LRR): LPL-C	Lat:		Long:	Datum:
Soil Map Unit Name: Steep bulled La	al Kiensh	a coasse so di	/ ac NWI classification:	Datami
Are climatic / hydrologic conditions on the site typica				
Are Vegetation, Soil, or Hydrology				
are Vegetation, Soil, or Hydrology _				
SUMMARY OF FINDINGS – Attach site	map showing	sampling point I	ocations, transects, imp	oortant features, etc
Hydrophytic Vegetation Present? Yes	No_X_	In the Country	12	
Hydric Soil Present? Yes	No X	Is the Sampled within a Wetlan		No X
Wetland Hydrology Present? Yes	No ¥	within a wettai	iur res	NO
Remarks: Vige taking recovering from	clearing Go	s full manag	mer ?	
/EGETATION – Use scientific names of	f plants.			
	A E and East of	Dominant Indicator	Dominance Test worksheet	:
Tree Stratum (Plot size:)	% Cover	Species? Status	Number of Dominant Species	
1. 11074			That Are OBL, FACW, or FAC	D:(A)
2			Total Number of Dominant	1
3			Species Across All Strata:	(B)
4		= Total Cover	Percent of Dominant Species	
Sapling/Shrub Stratum (Plot size:		- Total Cover	That Are OBL, FACW, or FAC	$ \qquad \qquad (A/B) $
1			Prevalence Index workshee	t:
2			Total % Cover of:	Multiply by:
3			OBL species	
4			FACW species	
5			FAC species	
Herb Stratum (Plot size:)		= Total Cover	FACU species	x 4 =
1. Brassica nigra	90%	yes UPL	Column Totals: 100	e-th
2. Suli burn Cmill thistle	870	No upe	Column Totals	(A)(B)
3. Phaelia Sp.	22	NO UPL	Prevalence Index = B/A	·=
4			Hydrophytic Vegetation Ind	
5			Dominance Test is >50%	
6			Prevalence Index is ≤3.0	
7			Morphological Adaptation data in Remarks or or	is' (Provide supporting a separate sheet)
8	. //3	# NY 2	Problematic Hydrophytic	
Woody Vine Stratum (Plot size:)	100%	= Total Cover		Verification (
1			<sup>1</sup> Indicators of hydric soil and v	
2.			be present, unless disturbed of	or problematic.
		= Total Cover	Hydrophytic	
% Bare Ground in Herb Stratum %	Cover of Biotic Cru	ist &	Vegetation Present? Yes	No V
		***		~
Remarks: Namew gully Small	icitersheel.			
J ,				

•	-	н	

Depth Ma		Redox Features  Color (moist) % Type <sup>1</sup>	Loo <sup>2</sup> Touture	Domorko
(inches) Color (moi		Color (moist) % Type <sup>1</sup>		Remarks
0-18 104R31	3 100%	Control of the Control		ely loans
				_
				_
	<del></del>			-
	سنا تسسمان			
Type: C=Concentration, D	=Depletion, RM=Re	duced Matrix, CS=Covered or Coated	Sand Grains. 2l	Location: PL=Pore Lining, M=Matrix.
		Rs, unless otherwise noted.)		ors for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Redox (S5)	1 cn	n Muck (A9) (LRR C)
Histic Epipedon (A2)		Stripped Matrix (S6)		n Muck (A10) (LRR B)
Black Histic (A3)		Loamy Mucky Mineral (F1)		luced Vertic (F18)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	The second secon	Parent Material (TF2)
Stratified Layers (A5) (L	RR C)	Depleted Matrix (F3)	Othe	er (Explain in Remarks)
1 cm Muck (A9) (LRR I		Redox Dark Surface (F6)		
Depleted Below Dark S		Depleted Dark Surface (F7)		
Thick Dark Surface (A1	2)	Redox Depressions (F8)	3Indicato	ors of hydrophytic vegetation and
Sandy Mucky Mineral (	S1)	Vernal Pools (F9)	wetlar	nd hydrology must be present,
Sandy Gleyed Matrix (S	64)		unless	s disturbed or problematic.
Restrictive Layer (if prese	nt):		1	
Type:				4
Depth (inches):	ydic Sol	indicators observe		oil Present? Yes No <u>X</u>
Remarks: Awa No No No	ydric Soil	inclicators observe		oil Present? Yes No <u>X</u>
YDROLOGY		inclicators observe		oil Present? Yes No <u>X</u>
YDROLOGY Wetland Hydrology Indica	tors:		0	
YDROLOGY Wetland Hydrology Indica	tors:		0	condary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indica	tors:		Sec	condary Indicators (2 or more required) Water Marks (B1) ( <b>Riverine</b> )
YDROLOGY  Vetland Hydrology Indica  Primary Indicators (minimun  Surface Water (A1)	tors:	eck all that apply)	Sec	condary Indicators (2 or more required)
YDROLOGY  Wetland Hydrology Indica  Primary Indicators (minimum	tors:	eck all that apply) Salt Crust (B11)	Sec	condary Indicators (2 or more required) Water Marks (B1) ( <b>Riverine</b> )
YDROLOGY  Vetland Hydrology Indica  Primary Indicators (minimum  Surface Water (A1)  High Water Table (A2)	tors: n of one required; ch	eck all that apply) Salt Crust (B11) Biotic Crust (B12)	Sec	condary Indicators (2 or more required) Water Marks (B1) ( <b>Riverine</b> ) Sediment Deposits (B2) ( <b>Riverine</b> )
YDROLOGY  Wetland Hydrology Indica  Primary Indicators (minimun  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Non	tors: n of one required; ch	eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)	Sec.	Condary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
YDROLOGY  Wetland Hydrology Indica  Primary Indicators (minimun  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Non  Sediment Deposits (B2)	tors: n of one required; ch riverine) ) (Nonriverine)	eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Li	Sec	Condary 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)
YDROLOGY  Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor	tors: n of one required; ch riverine) n (Nonriverine) nriverine)	eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Li Presence of Reduced Iron (C4)	ving Roots (C3)	Condary 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)
YDROLOGY  Wetland Hydrology Indica  Primary Indicators (minimun  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Non  Sediment Deposits (B2)  Drift Deposits (B3) (Nor  Surface Soil Cracks (B6)	tors: n of one required; ch riverine) ((Nonriverine) nriverine)	eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Li  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled	Sec 	condary 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)
YDROLOGY  Wetland Hydrology Indica  Primary Indicators (minimun  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Non  Sediment Deposits (B2)  Drift Deposits (B3) (Nor  Surface Soil Cracks (B6)  Inundation Visible on Ad	tors: n of one required; ch riverine) (Nonriverine) nriverine) s)	eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7)	Sec	Condary 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)
YDROLOGY  Wetland Hydrology Indica  Primary Indicators (minimun  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Non  Sediment Deposits (B2)  Drift Deposits (B3) (Nor  Surface Soil Cracks (B6)  Inundation Visible on Ac  Water-Stained Leaves (	tors: n of one required; ch riverine) (Nonriverine) nriverine) s)	eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Li  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled	Sec	condary 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)
YDROLOGY  Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ac Water-Stained Leaves (Field Observations:	riverine) (Nonriverine) (nriverine) (s) erial Imagery (B7)	eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Li  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled  Thin Muck Surface (C7)  Other (Explain in Remarks)	Sec	Condary 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)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ac Water-Stained Leaves ( Field Observations: Surface Water Present?	tors: n of one required; ch riverine) (Nonriverine) nriverine) (S) erial Imagery (B7) (B9)	eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)	ving Roots (C3) Soils (C6)	Condary 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)
YDROLOGY  Wetland Hydrology Indica Primary Indicators (minimun Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ac Water-Stained Leaves (Field Observations: Surface Water Present?	riverine) (Nonriverine) (Nonriverine) (s) erial Imagery (B7) B9)  Yes No Yes No _	eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6)	Condary 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)
YDROLOGY  Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ac Water-Stained Leaves ( Field Observations: Surface Water Present? Water Table Present? Saturation Present?	riverine) (Nonriverine) (Nonriverine) (s) erial Imagery (B7) B9)  Yes No Yes No _	eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)	ving Roots (C3) Soils (C6)	Condary 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)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ac Water-Stained Leaves ( Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	tors: n of one required; cheriverine) (Nonriverine) nriverine) si) erial Imagery (B7) (B9)  Yes No Yes No Yes No Yes No	eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Li  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hydrold	Condary 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)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ac Water-Stained Leaves ( Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	tors: n of one required; cheriverine) (Nonriverine) nriverine) si) erial Imagery (B7) (B9)  Yes No Yes No Yes No Yes No	eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hydrold	Condary 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)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ac Water-Stained Leaves ( Field Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st	riverine) (Nonriverine) (Nonriverine) (S) erial Imagery (B7) (B9)  Yes No No Yes No Yes No Yes No No Yes No No No	eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hydroloections), if available:	Condary 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)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ac Water-Stained Leaves ( Field Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st	riverine) (Nonriverine) (Nonriverine) (S) erial Imagery (B7) (B9)  Yes No No Yes No Yes No Yes No No Yes No No No	eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hydroloections), if available:	Condary 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)
YDROLOGY  Wetland Hydrology Indica  Primary Indicators (minimun  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Non  Sediment Deposits (B2)  Drift Deposits (B3) (Nor  Surface Soil Cracks (B6)  Inundation Visible on Ac  Water-Stained Leaves (B6)  Field Observations:  Surface Water Present?  Water Table Present?  Saturation Present?  Signification Present?	riverine) (Nonriverine) (Nonriverine) (S) erial Imagery (B7) (B9)  Yes No No Yes No Yes No Yes No No Yes No No No	eck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hydroloections), if available:	Condary 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)
YDROLOGY  Wetland Hydrology Indica Primary Indicators (minimun Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ac Water-Stained Leaves ( Field Observations: Surface Water Present? Water Table Present? Saturation Present? Saturation Present? Includes capillary fringe) Describe Recorded Data (st	riverine) ((Nonriverine) (nriverine) (S) (erial Imagery (B7) (B9)  Yes No Yes No Yes No Yes No Yes No Yes No	eck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Li  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hydroloections), if available:	Condary 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 (CS)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)

WETLAND	DETERMINATION	DATA FORM	- Arid West Region	
Project/Site: La L. (a.5	City	County: San )	izer Counter	Sampling Date: 7/25/11
Applicant/Owner: Accidence.	J.,	rodiny.	State: Col-	Sampling Point: 3
Investigator(s): G. Sched . E. McK				
Landform (hillslope, terrace, etc.): Walley	de la	cal relief (concave	convex none).	Slone (%). 0 - 2
Subregion (LRR): LRR-C	20 HAM TO	carreller (concave,	Lange	Stope (70).
Soil Map Unit Name: Steep Gulled 10	Lat:	7 . w	Long.	Datum
Soil Map Unit Name: Steep Gulle as 10	mo / cune ba	LOCASE SELECT	NVVI classific	auon.
Are climatic / hydrologic conditions on the site typic				
Are Vegetation, Soil, or Hydrology				
Are Vegetation, Soil, or Hydrology	naturally proble	matic? Pe (If ne	eeded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach sit	e map showing sa	mpling point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes	X No X No X No	Is the Sampled within a Wetlan		No
Remarks:				
VEGETATION – Use scientific names	of plants.			
Tanà Charles (Diet sine)		ominant Indicator	Dominance Test work	sheet:
1. Silve Ceneral for	- Co. Co. Co. Co.	Decies? Status	Number of Dominant S That Are OBL, FACW,	
2. Salir Casilesis		LES FACE	That Are OBL, FACVI,	011AC(A)
3.		J Jacob	Total Number of Domin Species Across All Stra	
4				
	902 =	Fotal Cover	Percent of Dominant Sp That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size:  1. Bacchair Saleafolia	_) 870 (	les Far.	Prevalence Index wor	ksheet:
2		Jus Trica		Multiply by:
3.				x 1 =
4.				x 2 =
5.			FAC species	x 3 =
	_ S20 =	Total Cover	FACU species	x 4 =
Herb Stratum (Plot size:)	-		UPL species	x 5 =
1. Malare Simbones	7.57		Column Totals:	(A) (B)
2. Ropinga quetra	790 V	9	Prevalence Index	= B/A =
Name and the state of the state			Hydrophytic Vegetation	
4			X Dominance Test is	
5			Prevalence Index is	
6			A STATE OF THE PARTY OF THE PAR	ptations <sup>1</sup> (Provide supporting
7 8			data in Remarks	s or on a separate sheet)
0		Fotal Cover	Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:	)			
1			<sup>1</sup> Indicators of hydric soi be present, unless distu	I and wetland hydrology must
2		<del></del>	The state of the s	arbed of problematic.
L		Total Cover	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum	% Cover of Biotic Crust	0	Present? Ye	s <u>X</u> No
Remarks:				

Depth Matrix	Redox Features Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture Remarks
(inches) Color (moist) %	,	
7-18 104R3/Z 9898	?	Sandy Warn
	· · · · · · · · · · · · · · · · · · ·	
	4 D 1	Sand Carles 2 postions DI - Boro Lining M-Matrix
lydric Soil Indicators: (Applicable to a	M=Reduced Matrix, CS=Covered or Coated	Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.  Indicators for Problematic Hydric Soils <sup>3</sup> :
		1 cm Muck (A9) (LRR C)
Histosol (A1)	Sandy Redox (S5) Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Histic Epipedon (A2) Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)	
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
Thick Dark Surface (A12)	Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)		unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		7000 1000 1000 1200
Double Contract.		1
Depth (inches):	ic 5 free king	Hydric Soil Present? Yes No
Remarks: Sandy liam w/ organ	ic 5 free king	Hydric Soil Present? Yes _ No
Remarks: Sandy litam w/ organ	ic 5 free king	Hydric Soil Present? Yes _ No
YDROLOGY Wetland Hydrology Indicators:	•	
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require	ed; check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  Surface Water (A1)	•	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)
YDROLOGY Vetland Hydrology Indicators:  Primary Indicators (minimum of one require Surface Water (A1)	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1)  High Water Table (A2)  Saturation (A3)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required)  — Water Marks (B1) (Riverine)  — Sediment Deposits (B2) (Riverine)  — Drift Deposits (B3) (Riverine)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one require)  Surface Water (A1)  High Water Table (A2)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required)  — Water Marks (B1) (Riverine)  — Sediment Deposits (B2) (Riverine)  — Drift Deposits (B3) (Riverine)  — Drainage Patterns (B10)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  ) Oxidized Rhizospheres along Li	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Iving Roots (C3)  Dry-Season Water Table (C2)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  ) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  iving Roots (C3)  Crayfish Burrows (C8)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  ) Oxidized Rhizospheres along Li	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  iving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C8)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  ) Oxidized Rhizospheres along Li  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  iving Roots (C3)  Crayfish Burrows (C8)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Li  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Iving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 (Inundation Visible on	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  ) Oxidized Rhizospheres along Li  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  iving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 (Inundation Visible on Aerial Imagery (Inundation Visible on Aerial Imagery (Inundation Visible Observations:  Surface Water Present?	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) ) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):3''	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  iving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 (Inundation Visible on Aerial Imagery (Inundation Visible on Aerial Imagery (Inundation Visible Observations:  Surface Water Present?	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) ) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):3''	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  iving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 (Inundation Visible on	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) ) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled B7) 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)  iving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 (Inundation Visible on	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Recent Iron Remarks)  No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 (Inundation Visible on	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 (Inundation Visible on	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Recent Iron Reduction in Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Iving Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6) Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No  ections), if available:
Primary Indicators (minimum of one required 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 (Inundation Visible Observations:  Surface Water Present?  Ves Yes Yes Includes capillary fringe)  Describe Recorded Data (stream gauge, Inundation Visible Recorded Data (stream gauge)	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Recent Iron Reduction in Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  iving Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6) Saturation Visible on Aerial Imagery (CS)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No  ections), if available:
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 (Inundation Visible Observations:  Surface Water Present?  Ves  Saturation Present?  Ves  Saturation Present?  Observible Recorded Data (stream gauge, Incoludes capillary fringe)	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Recent Iron Reduction in Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Ving Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No

W	ETLAND DETE	RMINATIO	ON DATA FORM	- Arid West Region
Project/Site: Las Lulas			City/County:	u Diego Combs Sampling Date: 2/25/11
Applicant/Owner: Acceptive				State: CA Sampling Point: 4
Investigator(s): 6- Scheid	E. Mcleinne	-	Section, Township, Ra	ange:
Landform (hillslope, terrace, etc.):	allie both	m	Local relief (concave,	convex, none): Corrcave Slope (%): Z
Subregion (LRR): LRR-C	0	Lat:		Long: Datum:
Soil Man Unit Name: Steam G. G.	2000 / c.d	1 Ciene	ha I Make Show	La Coam NWI classification:
Are climatic / hydrologic conditions on	the site typical for th	is time of ve	ar? Yes X No	(If no, explain in Remarks.)
				"Normal Circumstances" present? Yes X No
			~	
				eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - A	Attach site map	showing	sampling point	locations, transects, important features, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X N Yes X N	lo	Is the Sampled within a Wetla	
Remarks: Verx theor clear	ed; Aree a	distur	bed we flamo	$\mathcal{C}_{\cdot}$
VEGETATION – Use scientific	names of plar	nts.		
Two Officials (District			Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:			Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1. Nove 2.				That Are OBL, FACW, or FAC: (A)
3				Total Number of Dominant Species Across All Strata:  (B)
4				
Sapling/Shrub Stratum (Plot size:			= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1 12 0013				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x 1 =
4				FACW species $12 \times 2 = 24$
5		-		FAC species x 3 =
Herb Stratum (Plot size:	X.		= Total Cover	FACU species x 4 =
1. Funck crispus	/	10%	No FACIO	UPL species 87 x 5 = 435
2. Raphans Sateva		852	yes up	Column Totals: 49 (A) 459 (B)
3. Corriem manelateur		2	NO FAC	Prevalence Index = B/A = 4.6
4. mill thistic / Can	~	7	NO UPL	Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
6.				Prevalence Index is ≤3.0 <sup>1</sup>
7.				Morphological Adaptations <sup>1</sup> (Provide supporting
8.				data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size:	)	99	= Total Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1		-		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
			= Total Cover	Hydrophytic
% Bare Ground in Herb Stratum	3 % Cour		ust	Vegetation Present? Yes No X
Remarks:	/ 76 Cove	OI DIOUG OF	ust	riesentr lesNo_/~_
nonano.				

2	-		
•			

Sampling Point: Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Depth (inches) Color (moist) 10423 100% <sup>2</sup>Location: PL=Pore Lining, M=Matrix. <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils3: \_ 1 cm Muck (A9) (LRR C) Histosol (A1) \_\_ Sandy Redox (S5) 2 cm Muck (A10) (LRR B) Histic Epipedon (A2) Stripped Matrix (S6) Reduced Vertic (F18) Black Histic (A3) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Hydrogen Sulfide (A4) ★ Depleted Matrix (F3) Other (Explain in Remarks) Stratified Layers (A5) (LRR C) Redox Dark Surface (F6) 1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Redox Depressions (F8) Thick Dark Surface (A12) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, Sandy Mucky Mineral (S1) Vernal Pools (F9) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Hydric Soil Present? Depth (inches): \_ Remarks: HYDROLOGY

Primary Indicators (minimum of one required; ch	eck all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1) Surface 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)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soil</li> <li>Thin Muck Surface (C7)</li> <li>Other (Explain in Remarks)</li> </ul>	Water Marks (B1) (Riverine)     Sediment Deposits (B2) (Riverine)     Drift Deposits (B3) (Riverine)     Drainage Patterns (B10) g Roots (C3)    Dry-Season Water Table (C2)     Crayfish Burrows (C8)     Saturation Visible on Aerial Imagery (C9)     Shallow Aquitard (D3)     FAC-Neutral Test (D5)
Saturation Present? Yes <u>X</u> No _ (includes capillary fringe)		Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monito  Remarks: Surface works in the		ons), if available:

Project/Site: Las Lilas	c	ity/County: <u>San O</u>	ugo County	Sampling Date: 2/25/11
Applicant/Owner: Aceretus			State: CA	Sampling Point:5
nvestigator(s): 6. Schere	S	ection, Township, Ra	inge:	
andform (hillslope, terrace, etc.): Lally be Her	n	ocal relief (concave,	convex, none): _Con	Slope (%): 2
Subregion (LRR): LRR-C	Lat:		_ Long:	Datum:
oil Map Unit Name: Steep bulled Land	/ Fallboo	ok sandr le	nWI class	ification:
re climatic / hydrologic conditions on the site typical fo	/	//		
re Vegetation, Soil, or Hydrology	significantly d	isturbed? No Are	"Normal Circumstances	s" present? Yes X No
re Vegetation, Soil, or Hydrology			eeded, explain any ans	
SUMMARY OF FINDINGS – Attach site m				
Hydric Soil Present? Yes	No X No X	Is the Sampled within a Wetlan	I Area nd? Yes	
Remarks: Mec on Lerrace above C	DHWM. 6	Piparian (	regetation	
/EGETATION – Use scientific names of p	lants.			
Tree Stratum /Diet size:	3,100,000,000	Dominant Indicator Species? Status	Dominance Test wo	
Tree Stratum (Plot size:)  1		yes FACU	Number of Dominant That Are OBL, FACV	
2.		0		
3.			Total Number of Don Species Across All S	
4			Percent of Dominant	Species
Carling (Church Charterns (Diet size)		= Total Cover	That Are OBL, FACV	
Sapling/Shrub Stratum (Plot size:)  1. Baccharis Salva folia	4.5	UDE EDOW	Prevalence Index w	orksheet:
2.		- S THEE		f: Multiply by:
3.			OBL species	x 1 =
4.			FACW species	x 2 =
5			A CONTRACT OF A	x 3 =
Llank Christian (Diet sine)		= Total Cover		x 4 =
Herb Stratum (Plot size:)  1. Raphnus Satura	10%	was UPL		x 5 =
2		-	Column Totals:	(A) (B)
3.			Prevalence Ind	ex = B/A =
4.			Hydrophytic Vegeta	
5.			X Dominance Test	
6			Prevalence Inde	
7				daptations <sup>1</sup> (Provide supporting rks or on a separate sheet)
8		and the first of the second		rophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:)	1000	= Total Cover	- 100 Acres 10 Acres	
1				soil and wetland hydrology must
2.			be present, unless di	sturbed or problematic.
	cover of Biotic Cru	= Total Cover	Hydrophytic Vegetation Present?	Yes No
Remarks:	STOLO OF DIOLIC OF		. resent:	
Inclinates.				

Sampling Point:	6
Sampling Form	3

Depth	Matrix Color (moist)	% C	Redox F olor (moist)	% Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
						Texture	Remarks
1-12 1	10/83/2						-
					المستحد		
							-
							-
						-	
			uced Matrix, CS=C		ed Sand Gra		cation: PL=Pore Lining, M=Matrix.
ydric Soil Indic	ators: (Applica	ble to all LRRs	s, unless otherwis	se noted.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
_ Histosol (A1)			_ Sandy Redox (	S5)		1 cm M	fuck (A9) (LRR C)
Histic Epipede	on (A2)	_	Stripped Matrix	(S6)		2 cm N	fuck (A10) (LRR B)
_ Black Histic (A	A3)	102	_ Loamy Mucky I	Mineral (F1)			ed Vertic (F18)
_ Hydrogen Sul	lfide (A4)		_ Loamy Gleyed	Matrix (F2)		Red Pa	arent Material (TF2)
_ Stratified Laye	ers (A5) (LRR C	) _	Depleted Matrix			Other (	Explain in Remarks)
_ 1 cm Muck (A			_ Redox Dark Su				
	ow Dark Surface	(A11) _	_ Depleted Dark				
_ Thick Dark Su		-	_ Redox Depress				of hydrophytic vegetation and
Sandy Mucky		0-	_ Vernal Pools (F	F9)			hydrology must be present,
Sandy Gleyer	the state of the s					unless d	isturbed or problematic.
estrictive Layer	r (if present):						
Type:							
туро							
Depth (inches)	1		uec .			Hydric Soil	Present? Yes No <u>×</u>
Depth (inches) Remarks: No A	1		uec .			Hydric Soil	Present? Yes No K
Depth (inches)	:		uec ~			Hydric Soil	Present? Yes No K
Depth (inches) demarks: No /	ey chie so	l, opser					
Depth (inches) demarks: No // //DROLOGY //Vetland Hydrolo //inmary Indicators	egy Indicators:	l, opser	ck all that apply)	4)		Secon	idary Indicators (2 or more required)
Depth (inches) emarks: No A  /DROLOGY /etland Hydrolo rimary Indicators Surface Wate	gy Indicators:	l, opser	ck all that apply) Salt Crust (B1			Secon	idary Indicators (2 or more required) /ater Marks (B1) ( <b>Riverine</b> )
YDROLOGY Vetland Hydrolo rimary Indicators Surface Wate High Water Ta	egy Indicators: s (minimum of orer (A1) able (A2)	l, opser	ck all that apply) Salt Crust (B1 Biotic Crust (E	312)		<u>Secon</u> W S	ndary Indicators (2 or more required) /ater Marks (B1) ( <b>Riverine</b> ) ediment Deposits (B2) ( <b>Riverine</b> )
Depth (inches)  demarks: No //  //DROLOGY  //Vetland Hydrolo  //mary Indicators  Surface Wate  High Water Ta  Saturation (A:	egy Indicators: (Minimum of orer (A1) able (A2)	Indicated:	ck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert	B12) rebrates (B13)		<u>Secon</u> W Si D	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine)
Depth (inches)  The property of the property o	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonriveria	Indicated the required; che	ck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul	ebrates (B13) fide Odor (C1)		Secon W Si D D	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10)
Pepth (inches) Remarks: No A  Permarks: No A  Permary Indicators Surface Wate High Water Tile Saturation (A: Water Marks	egy Indicators: (Minimum of orer (A1) able (A2)	Indicated the required; che	ck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul	B12) ebrates (B13) fide Odor (C1) cospheres along		Secon  W S D D ts (C3) D	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2)
POPPOLOGY Vetland Hydrolo Trimary Indicators Surface Wate High Water To Saturation (A: Water Marks Sediment Dep	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonriveria	Indicated:	ck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul	ebrates (B13) fide Odor (C1)		Secon  W S D D ts (C3) D	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10)
Primary Indicators Surface Water High Water To Saturation (A: Water Marks Sediment Dep	egy Indicators: s (minimum of or er (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering posits (B3) (Nonrivering	Indicated:	sck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F	B12) ebrates (B13) fide Odor (C1) cospheres along	4)	Secon  W S D D D ts (C3) C	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2)
Popth (inches)  Remarks: No A  Primary Indicators  Surface Wate  High Water To  Saturation (A:  Water Marks  Sediment Deposits  Drift Deposits  Surface Soil (A:	egy Indicators: s (minimum of or er (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering posits (B3) (Nonrivering	e required; che	sck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F	312) rebrates (B13) fide Odor (C1) rospheres along Reduced Iron (C4) reduction in Tille	4)	Secon  W S D D D ts (C3) C C	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
Depth (inches)  Jemarks: No A  JOROLOGY  Vetland Hydrolo  Timary Indicators  Surface Wate  High Water Ta  Saturation (A:  Water Marks  Sediment Dep  Drift Deposits  Surface Soil (Inundation Visitation Visitati	egy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering posits (B2) (Nonrivering posits (B3) (Nonrivering posits (B6))	e required; che	sck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R	ebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C4) deduction in Tille	4)	Secon  W Si D D ts (C3) D C Si	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C8
Popth (inches)  Remarks: No //  Primary Indicators  Surface Wate  High Water Ta  Saturation (A:  Water Marks  Sediment Deposits  Surface Soil (Inundation Visual Water-Stainer)	egy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering posits (B2) (Nonrivering posits (B3) (Nonrivering posits (B3)) (Nonrivering po	e required; che	ck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su	ebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C4) deduction in Tille	4)	Secon  W Si D D ts (C3) D C Si	Idary Indicators (2 or more required)  /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3)
Popth (inches) Remarks: No A  POROLOGY  Vetland Hydrolo Primary Indicators Surface Wate High Water Ta Saturation (A Water Marks Sediment Dep Drift Deposits Surface Soil ( Inundation Vis Water-Stained	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering Cracks (B6) sible on Aerial Ind Leaves (B9) ns:	indicated:  indicated:  indicated:  ine required; che  ne)  riverine)  ne)  nagery (B7)	ck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su	a12) rebrates (B13) fide Odor (C1) rospheres along Reduced Iron (C4 reduction in Tille rface (C7) n in Remarks)	4) d Soils (C6)	Secon  W Si D D ts (C3) D C Si	Idary Indicators (2 or more required)  /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3)
Property (inches)  Remarks: No A  Property (A)  Property (A)  Primary Indicators  Surface Water  High Water To  Saturation (A)  Water Marks  Sediment Deposits  Surface Soil (A)  Inundation Vis  Water-Stained  Field Observation  Surface Water Press	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering Cracks (B6) sible on Aerial Ind Leaves (B9) ns: esent? Ye	indicated:  indica	Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Other (Explair	at 2) sebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C4 deduction in Tille rface (C7) in in Remarks) s):	4) d Soils (C6)	Secon  W Si D D ts (C3) D C Si	Idary Indicators (2 or more required)  /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3)
Property (inches)  Remarks: No / (a)  Property Vetland Hydrolo  Primary Indicators  Surface Water  High Water Ta  Saturation (A:  Water Marks  Sediment Deposits  Surface Soil (a)  Inundation Vis  Water-Stained  Field Observation  Surface Water Preservater Table Preservater	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering Cracks (B6) sible on Aerial Ind Leaves (B9) ns: esent? Yee	indicated:  indica	ck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Other (Explain	sate) sebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C4 deduction in Tille rface (C7) in in Remarks) s):	4) d Soils (C6)	Secon  W Si D D ts (C3) D C Si Si Fi	idary Indicators (2 or more required)  /ater Marks (B1) (Riverine)  ediment Deposits (B2) (Riverine)  rift Deposits (B3) (Riverine)  rainage Patterns (B10)  ry-Season Water Table (C2)  rayfish Burrows (C8)  aturation Visible on Aerial Imagery (C8)  hallow Aquitard (D3)  AC-Neutral Test (D5)
Property (inches)  Remarks: No //  Property Vetland Hydrolo  Primary Indicators  Surface Water  High Water Ta  Saturation (A:  Water Marks  Sediment Deposits  Surface Soil (Inundation Vistation Vistation)  Water-Stained  Field Observation  Surface Water Presentation Presentatio	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering posits (B2) (Nonrivering posits (B3)) (Nonrivering po	indicated:  indica	Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Other (Explair	sate) sebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C4 deduction in Tille rface (C7) in in Remarks) s):	4) d Soils (C6)	Secon  W Si D D ts (C3) D C Si Si Fi	Idary Indicators (2 or more required)  /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C8) hallow Aquitard (D3)
Property (inches)  Remarks: No / A  Property Vetland Hydrolo  Primary Indicators  Surface Wate  High Water Ta  Saturation (A:  Water Marks  Sediment Dep  Drift Deposits  Surface Soil (Inundation Visual Water-Stained Visual Water Presentation Presentati	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering Cracks (B6) sible on Aerial Ind Leaves (B9) ns: esent? esent? year	indicated:  indica	ck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Other (Explain	sate) sebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C4) reduction in Tille rface (C7) n in Remarks) s): s):	4) d Soils (C6)	Secon	idary Indicators (2 or more required)  /ater Marks (B1) (Riverine)  ediment Deposits (B2) (Riverine)  rift Deposits (B3) (Riverine)  rainage Patterns (B10)  ry-Season Water Table (C2)  rayfish Burrows (C8)  aturation Visible on Aerial Imagery (C8)  hallow Aquitard (D3)  AC-Neutral Test (D5)
Property (inches)  Remarks: No / A  Property Vetland Hydrolo  Primary Indicators  Surface Wate  High Water Ta  Saturation (A:  Water Marks  Sediment Dep  Drift Deposits  Surface Soil (Inundation Visual Water-Stained Visual Water Presentation Presentati	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering Cracks (B6) sible on Aerial Ind Leaves (B9) ns: esent? esent? year	indicated:  indica	ck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Other (Explain Depth (inche	sate) sebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C4) reduction in Tille rface (C7) n in Remarks) s): s):	4) d Soils (C6)	Secon	idary Indicators (2 or more required)  /ater Marks (B1) (Riverine)  ediment Deposits (B2) (Riverine)  rift Deposits (B3) (Riverine)  rainage Patterns (B10)  ry-Season Water Table (C2)  rayfish Burrows (C8)  aturation Visible on Aerial Imagery (C8)  hallow Aquitard (D3)  AC-Neutral Test (D5)
Popth (inches) Remarks: No A  Proposition of the content of the co	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering Cracks (B6) sible on Aerial Ind Leaves (B9) ns: esent? esent? fringe) d Data (stream of the contract of the con	indica k. s  indica k. s  indica k. s  ne required; che  ne)  riverine)  nagery (B7)  ss No  ss No  gauge, monitori	sck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Other (Explain Depth (inche Depth (inche	sate) sebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C4) reduction in Tille rface (C7) n in Remarks) s): s): s):	4) d Soils (C6)  Wetla	Secon   W   S   S   S   S   S   S   S   S   S	Idary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C8 hallow Aquitard (D3) AC-Neutral Test (D5)
Popth (inches) Remarks: No A  Proposition of the content of the co	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering Cracks (B6) sible on Aerial Ind Leaves (B9) ns: esent? esent? fringe) d Data (stream of the contract of the con	indica k. s  indica k. s  indica k. s  ne required; che  ne)  riverine)  nagery (B7)  ss No  ss No  gauge, monitori	sck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Other (Explain Depth (inche Depth (inche	sate) sebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C4) reduction in Tille rface (C7) n in Remarks) s): s): s):	4) d Soils (C6)  Wetla	Secon   W   S   S   S   S   S   S   S   S   S	Idary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C8 hallow Aquitard (D3) AC-Neutral Test (D5)
Depth (inches) emarks: No A  /DROLOGY /etland Hydrolo rimary Indicators Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Surface Soil ( Inundation Vis Water-Stained ield Observation urface Water Presentaturation	gy Indicators: s (minimum of orer (A1) able (A2) 3) (B1) (Nonrivering posits (B2) (Nonrivering Cracks (B6) sible on Aerial Ind Leaves (B9) ns: esent? esent? fringe) d Data (stream of the contract of the con	indica k. s  indica k. s  indica k. s  ne required; che  ne)  riverine)  nagery (B7)  ss No  ss No  gauge, monitori	ck all that apply) Salt Crust (B1 Biotic Crust (E Aquatic Invert Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Other (Explain Depth (inche	sate) sebrates (B13) fide Odor (C1) cospheres along Reduced Iron (C4) reduction in Tille rface (C7) n in Remarks) s): s): s):	4) d Soils (C6)  Wetla	Secon   W   S   S   S   S   S   S   S   S   S	Idary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C8 hallow Aquitard (D3) AC-Neutral Test (D5)

				State: GA Sampling Point: 6
Investigator(s): AB, GAS, EJV	N		Section, Township, F	Range:
Landform (hillslope, terrace, etc.):	les po Ho	ne	Local relief (concave	e, convex, none): <u>Con cave</u> Slope (%): <u>4</u>
Subregion (LRR):	the same of the contract of th			Long: Datum:
	The state of the s	1 -		NWI classification:
are climatic / hydrologic conditions on the			10	9
			1	e "Normal Circumstances" present? Yes Ko
			Q	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Att	ach site ma	p showing	sampling point	locations, transects, important features, e
Hydrophytic Vegetation Present?	Yes X	No	Is the Sample	ad Area
Hydric Soil Present?	Yes	No X		and? Yes No X
Wetland Hydrology Present?	Yes	No /	within a vvcti	and: TesNo
Remarks: Site and A	malala.	1000	a co chas	J OHUM
200 0114 3 0	oce prein	m Acri	ace a 1200	ac Onwhit.
EGETATION – Use scientific n	ames of pla	ints.		
			Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:			Species? Status	Number of Dominant Species
1. Salix Jaguiasala				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4		- 80		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:	)	80	= Total Cover	That Are OBL, FACW, or FAC: (A/
1. Baccharis Sallcifolia		_ 5	ULES FACE	Prevalence Index worksheet:
2.			0	Total % Cover of: Multiply by:
3				OBL species x 1 =
4		استاد		FACW species x 2 =
5				FAC species x 3 =
Herb Stratum (Plot size:	i.	_5	= Total Cover	FACU species x 4 =
1. Raphy Sativus	_)	15	INCE THE	UPL species x 5 =
. Nathuritz sur inns		- 1/	The ore	- Column Totals: (A) (E
3.				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
5.				∑ Dominance Test is >50%
5.				Prevalence Index is ≤3.01
\				Morphological Adaptations <sup>1</sup> (Provide supporting
3				data in Remarks or on a separate sheet)
		15	= Total Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Voody Vine Stratum (Plot size:				1 Indicators of hydric call and watland hydrology must
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.			T-4-10-	
		1	= Total Cover	Hydrophytic Vegetation
% Bare Ground in Herb Stratum	% Cov	er of Biotic Cr	ust	Present? Yes X No
Remarks:	1.		1	Il lyon &
Vegetation grown	ng or te	riace	above U	MWIN_
0	3			

	3	- 7		
0	-	T	ì.	
		•		

Sampling Point: \_\_\_\_\_

Depth Matrix	Redox Features	onfirm the absence of i	
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup> L	oc <sup>2</sup> Texture	Remarks
0-16 10YR 3-3 100		loam	
0/0 10/2 3 2 100			
			i
		2	
<sup>1</sup> Type: C=Concentration, D=Depletion, RI	M=Reduced Matrix, CS=Covered or Coated Sa		n: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a			Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)		(A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)		(A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced V	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		t Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Exp	lain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		w
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	3	Day of the San
Thick Dark Surface (A12)	Redox Depressions (F8)		drophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)		ology must be present,
Sandy Gleyed Matrix (S4)		unless distur	bed or problematic.
Restrictive Layer (if present):			
Type:			V
Depth (inches):		Hydric Soil Pres	sent? Yes No _X
IYDROLOGY			
Wetland Hydrology Indicators:			
일하게 되었어면 없는 아픈 이번 사람들이 되었다면 하지만 하는데 하는데 없었다.			
일하게 되었어면 없는 아픈 이번 사람들이 되었다면 하지만 하는데 하는데 없었다.	ed; check all that apply)	Secondary	Indicators (2 or more required)
일하게 되었어면 없는 아픈 이번 사람들이 되었다면 하지만 하는데 하는데 없었다.	ed; check all that apply) Salt Crust (B11)	Water	Marks (B1) (Riverine)
Primary Indicators (minimum of one require		Water	MARKET TO PURE THE STREET STREET OF THE STREET
Primary Indicators (minimum of one require  Surface Water (A1)	Salt Crust (B11)	Water	Marks (B1) (Riverine)
Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust (B11) Biotic Crust (B12)	Water Sedim Drift D	Marks (B1) (Riverine) ent Deposits (B2) (Riverine)
Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> </ul>	Water Sedim Drift D Draina	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine)
Primary Indicators (minimum of one required Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living</li> </ul>	Water Sedim Drift D Draina g Roots (C3) Dry-Si	Marks (B1) (Riverine) vent Deposits (B2) (Riverine) veposits (B3) (Riverine) veposits (B10)
Primary Indicators (minimum of one required Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4)	Water Sedim Drift D Draina g Roots (C3) Dry-Sa Crayfi	Marks (B1) (Riverine) tent Deposits (B2) (Riverine) teposits (B3) (Riverine) teposits (B10)
Primary Indicators (minimum of one required 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)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So	Water Sedim Drift D Draina ig Roots (C3) Dry-Si Crayfi ils (C6) Satura	Marks (B1) (Riverine) tent Deposits (B2) (Riverine) teposits (B3) (Riverine) teposits (B3) (Riverine) teposits (B10) teason Water Table (C2) tens Burrows (C8) tens (C8)
Primary Indicators (minimum of one required 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 (I	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7)	Water Sedim Drift D Draina g Roots (C3) Dry-Si Crayfi ils (C6) Satura Shallo	Marks (B1) (Riverine) pent Deposits (B2) (Riverine) peposits (B3) (Riverine) peposits (B10) peason Water Table (C2) pent Burrows (C8) pation Visible on Aerial Imagery (C9) per Market (C9) per Market (C9)
Primary Indicators (minimum of one required 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 (Inundation Visible on Aer	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So	Water Sedim Drift D Draina g Roots (C3) Dry-Si Crayfi ils (C6) Satura Shallo	Marks (B1) (Riverine) tent Deposits (B2) (Riverine) teposits (B3) (Riverine) teposits (B3) (Riverine) teposits (B10) teason Water Table (C2) tens Burrows (C8) tens (C8)
Primary Indicators (minimum of one required 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 (Inundation Visible on Aerial Imagery (Inundation Visible on Aerial Imagery (Inundation Visible Observations:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7) Other (Explain in Remarks)	Water Sedim Drift D Draina g Roots (C3) Dry-Si Crayfi ils (C6) Satura Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) w Aquitard (D3)
Primary Indicators (minimum of one required 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 (Incompleted Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7) Other (Explain in Remarks)	Water Sedim Drift D Draina g Roots (C3) Dry-Si Crayfi ils (C6) Satura Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) w Aquitard (D3)
Primary Indicators (minimum of one required 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 (Indicated Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes  Water Table Present?	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Water Sedim Drift D Draina g Roots (C3) Dry-Si Crayfi ills (C6) Satura Shallo FAC-N	Marks (B1) (Riverine) pent Deposits (B2) (Riverine) peposits (B3) (Riverine) peposits (B10) peason Water Table (C2) pent Burrows (C8) pation Visible on Aerial Imagery (C9) per Aquitard (D3) pent Agriculture (D5)
Primary Indicators (minimum of one required 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 (Inundation Visible on Aer	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7) Other (Explain in Remarks)	Water Sedim Drift D Draina g Roots (C3) Dry-Si Crayfi ils (C6) Satura Shallo	Marks (B1) (Riverine) pent Deposits (B2) (Riverine) peposits (B3) (Riverine) peposits (B10) peason Water Table (C2) pent Burrows (C8) pation Visible on Aerial Imagery (C9) per Aquitard (D3) pent Agriculture (D5)
Primary Indicators (minimum of one required 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 (Indicated Water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes  (includes capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Water Sedim Drift D Draina g Roots (C3) Dry-Si Ils (C6) Satura Shallo FAC-N  Wetland Hydrology Pre	Marks (B1) (Riverine) pent Deposits (B2) (Riverine) peposits (B3) (Riverine) peposits (B10) peason Water Table (C2) pent Burrows (C8) pation Visible on Aerial Imagery (C9) per Aquitard (D3) pent Agriculture (D5)
Primary Indicators (minimum of one required 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 (Indicated Water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes  (includes capillary fringe)  Describe Recorded Data (stream gauge, minimum of one required sequence.)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): No Depth (inches): nonitoring well, aerial photos, previous inspect	Water Sedim Drift D Draina g Roots (C3) Dry-Sa Crayfi ils (C6) Satura Shallo FAC-N  Wetland Hydrology Presions), if available:	Marks (B1) (Riverine) pent Deposits (B2) (Riverine) peposits (B3) (Riverine) page Patterns (B10) peason Water Table (C2) peason Witer Table (C2) peason Witer Table (C2) peason Witer Table (C3) peason Witer Table (C2) peason Water Table (C3) peason Water Table (C4) peaso
Primary Indicators (minimum of one required 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 (Induced Surface Surfa	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): No Depth (inches): nonitoring well, aerial photos, previous inspect	Water Sedim Drift D Draina g Roots (C3) Dry-Sa Crayfi ils (C6) Satura Shallo FAC-N  Wetland Hydrology Presions), if available:	Marks (B1) (Riverine) eent Deposits (B2) (Riverine) eeposits (B3) (Riverine) eeposits (B10) eeson Water Table (C2) esh Burrows (C8) etion Visible on Aerial Imagery (C9) ew Aquitard (D3) eleutral Test (D5)
Primary Indicators (minimum of one required 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 (Induced Surface Water Present?  Water Table Present?  Water Table Present?  Yes  Saturation Present?  Yes  (includes capillary fringe)  Describe Recorded Data (stream gauge, manual properties of the present of the	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): No Depth (inches): nonitoring well, aerial photos, previous inspect	Water Sedim Drift D Draina g Roots (C3) Dry-Sa Crayfi ils (C6) Satura Shallo FAC-N  Wetland Hydrology Presions), if available:	Marks (B1) (Riverine) pent Deposits (B2) (Riverine) peposits (B3) (Riverine) page Patterns (B10) peason Water Table (C2) peason Witer Table (C2) peason Witer Table (C2) peason Witer Table (C3) peason Witer Table (C2) peason Water Table (C3) peason Water Table (C4) peaso
Primary Indicators (minimum of one required 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 (Invalidation	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): No Depth (inches):	Water Sedim Drift D Draina g Roots (C3) Dry-Sa Crayfi ils (C6) Satura Shallo FAC-N  Wetland Hydrology Presions), if available:	Marks (B1) (Riverine) eent Deposits (B2) (Riverine) eeposits (B3) (Riverine) eeposits (B10) eeson Water Table (C2) esh Burrows (C8) etion Visible on Aerial Imagery (C9) ew Aquitard (D3) eleutral Test (D5)
Primary Indicators (minimum of one required 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 (Induced Surface Surfa	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): No Depth (inches): nonitoring well, aerial photos, previous inspect	Water Sedim Drift D Draina g Roots (C3) Dry-Sa Crayfi ils (C6) Satura Shallo FAC-N  Wetland Hydrology Presions), if available:	Marks (B1) (Riverine) tent Deposits (B2) (Riverine) teposits (B3) (Riverine) teposits (B3) (Riverine) teposits (B10) teason Water Table (C2) teason Water Table (C2) teason With Table (C2) teason With Table (C2) teason Water Table (C3) teason Wate

Applicant/Owner: According					
nvestigator(s): AB, GAS, E					
andform (hillslope, terrace, etc.):					
ubregion (LRR): 1 REC		Lat:		Long:	Datum:
oil Map Unit Name: Steep Gull	Eved Land	/ Crinch	a 1 oarse some	la Loam NWI classification:	
e climatic / hydrologic conditions on	the site typical fo	r this time of ye	ar? Yes X No	(If no, explain in Remarks.)	
re Vegetation, Soil, or	HydrologyX	significantly	disturbed? US Are	"Normal Circumstances" present?	Yes X No
e Vegetation, Soil, or			4		
UMMARY OF FINDINGS – A					
Hydrophytic Vegetation Present?	Yes X	No			
Hydric Soil Present?	Yes		Is the Sample		~
Vetland Hydrology Present?	Yes	No X	within a Wetla	and? YesNo	
EGETATION - Use scientific	names of p	Absolute	Dominant Indicator	Dominance Test worksheet:	
ree Stratum (Plot size:	)	% Cover	Species? Status	Number of Dominant Species	7
. Tamary remosissi	ma	80	().	That Are OBL, FACW, or FAC:	(A)
. Saly locursala		2	NO FACE	Total Number of Dominant	2
·				Species Across All Strata:	(B)
anling/Chruh Stratum (Plat aire)	,	82	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:	ldo (A)
Sachans Salicifolica	(	5_	ues FACUI	Prevalence Index worksheet:	
			0	Total % Cover of:	Multiply by:
				OBL species x	1 =
				FACW species x	2 =
				FAC species x	
erb Stratum (Plot size:	ζ.	_5_	= Total Cover	FACU species x	
Browns diandre		13	ues Hec	UPL species x	
This but here			0	Column Totals: (A	) (E
				Prevalence Index = B/A =	
				Hydrophytic Vegetation Indica	tors:
				∑ Dominance Test is >50%	
				Prevalence Index is ≤3.0 <sup>1</sup>	
				Morphological Adaptations <sup>1</sup> data in Remarks or on a s	(Provide supporting
				Problematic Hydrophytic Veg	
oody Vine Stratum (Plot size:	1	_13	= Total Cover		(Explain)
oody vine Stratum (Flot size.				<sup>1</sup> Indicators of hydric soil and wetl	and hydrology must
				be present, unless disturbed or p	
Bare Ground in Herb Stratum	1		= Total Cover	Hydrophytic Vegetation Present? Yes	No
Vegetation in	small re	ng aurun	dunau bu	uk of Ag. pond.	

- 2	- 67		
-	-		
	r 1		

Sampling Point:

Depth	Matrix		Redox	Feature			
(inches)	Color (moist)		Color (moist)	%	Type	Loc2	
0-12	10/R 3/3	98	54R 7/6	d	RM	M	Sandylogin
***							
							, <u></u>
•							
	-					-	
	-				-	_	
							Access to the second se
	Concentration, D=Dep					d Sand G	rains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all L	RRs, unless other	wise not	ed.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
Histoso	ol (A1)		Sandy Redo	x (S5)			1 cm Muck (A9) (LRR C)
	Epipedon (A2)		Stripped Mat	rix (S6)			2 cm Muck (A10) (LRR B)
	Histic (A3)		Loamy Muck		(F1)		Reduced Vertic (F18)
	en Sulfide (A4)		Loamy Gleye				Red Parent Material (TF2)
	ed Layers (A5) (LRR	C)	V Depleted Ma		11		Other (Explain in Remarks)
	luck (A9) (LRR D)	-,	Redox Dark		(F6)		Court Art a server serv
	ed Below Dark Surfac	e (A11)	Depleted Da				
	Dark Surface (A12)	~ (/ · · · · /	Redox Depre				<sup>3</sup> Indicators of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Pools		, 0)		wetland hydrology must be present,
			vernar roots	(1 3)			unless disturbed or problematic.
	Gleyed Matrix (S4)						unless distarbed of problematic.
	Layer (if present):						(A)
Type:							(Q'X
Depth (in	nches):						Hydric Soil Present? Yes X No
YDROLO	ngv			-			
	<u> Malana and an </u>						
	drology Indicators:		Description of the second				
Primary Indi	icators (minimum of c	ne required;	check all that apply	)			Secondary Indicators (2 or more required)
Surface	Water (A1)		Salt Crust (	B11)			Water Marks (B1) (Riverine)
High W	ater Table (A2)		Biotic Crust	(B12)			Sediment Deposits (B2) (Riverine)
Saturati	ion (A3)		Aquatic Inv	ertebrate	s (B13)		Drift Deposits (B3) (Riverine)
	Marks (B1) (Nonriver	ine)	Hydrogen S				Drainage Patterns (B10)
	ent Deposits (B2) (No		Oxidized RI			Living Roc	
			Presence o			W. W. S. S. W. S. W. S. S. W. S. S. W.	Crayfish Burrows (C8)
	eposits (B3) (Nonrive	ille)					
	Soil Cracks (B6)	(5.7)	Recent Iron			30118 (CC	**************************************
	tion Visible on Aerial I	magery (B7)	Thin Muck S				Shallow Aquitard (D3)
	Stained Leaves (B9)		Other (Expl	ain in Re	marks)		FAC-Neutral Test (D5)
Field Obser	rvations:		10				
Surface Wa	ter Present? Y	es No	Depth (incl	hes):	٠	- Y	
Water Table	Present? Y	es No	Depth (incl	hes):			
Saturation F		es No	1/				land Hydrology Present? Yes No X
includes ca	pillary fringe)						
Describe Re	ecorded Data (stream	gauge, moni	toring well, aerial pl	notos, pr	evious ins	pections),	if available:
Remarks:	open water	pond	Habitat	15	ad 14	cent	above Other.
	00 114	1	1 - 2 - 1 - 1			3115	2000-
	0		1 1	- ·	10-		17
	WSSIBLY	exempl	term (1.	16	HOLO	==	As pond!
				,			
_							

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

Redox Features

2	Project/Site: Las Lilas		City/County: San D	lugo Comby Sampling Date: 3/1/11
Landform (hillslope, lerrace, etc.): List Long: Local relief (conceve, convex, none): Conceve. Slope (%): Lot. Long: Datum: Solid method (LRR): LP.2C. Lat. Long: Datum: Long: Datum: Solid method (LRR): Long: Datum: Solid (LRR): Long: NWI classification: NWI classi			Constants of the water of	State: CA Sampling Point:
Subregion (LRR): Let Long: Datum: Soli Map Unit Name: SHAP Coulded Long / All Cook South Long: NVI classification: Are Vegetation Soli or Hydrology significantly disturbed? No Are Normal Circumstances' present? Yes No Are Vegetation Soli or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, Hydrophytic Vegetation Present? Yes No Ye	nvestigator(s): 6. Scheid		Section, Township, Ra	ange:
Soil Map Unit Name: Step Soulted Load   Fall brook Sandy Load   NVII classification:    Are climate! / hydrologic conditions on the site typical for this time of year? Yes   No	andform (hillslope, terrace, etc.): <u>L. l</u>	Slope drainage	_ Local relief (concave,	, convex, none): <u>Concare</u> Slope (%): <u>6</u> -
Ne climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)  Nere Vegetation Soil or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes No Are "Normal Circumstances" present? Yes No Are "Normal Circumstances" present? Yes No Attach site map showing sampling point locations, transects, important features, Hydrophytic Vegetation Present? Yes No Within a Wetland? Yes No Total Number of Dominant Species That Are OBL FACW, or FAC: 1 (Are OBL FACW, or FAC: 1 (Are OBL FACW, or FAC: 1 (Are OBL FACW, or FAC: 2 (Are OBL FACW, or FAC: 3 (Are OBL FACW, or FAC: 4 (Are OB	Subregion (LRR): LRR-C	Lat:		Long: Datum:
Tree Stratum (Plot size:    Sopilar/Shrub Stratum (Plot size:   So	Soil Map Unit Name: Stees bull	red Land / Falls	rook Sandy Le	NWI classification:
Summary   Soil	4			
Summary   Soil	re Vegetation , Soil , or	Hydrology significantl	y disturbed? No Are	"Normal Circumstances" present? Yes No
Summary   Summ				
Hydric Soil Present?  Wetland Hydrology Hy				
Hydric Soil Present?  Wetland Hydrology Hydrolog	Hydrophytic Vegetation Present?	Yes No X		1955
Remarks:				
Absolute   Dominant Indicator   Species   Status   Dominant Indicator   Species   Species   Status   Spec	Wetland Hydrology Present?	Yes No	within a wetia	ind? YesNo
Absolute % Cover   Species? Slatus   Species   Status				
Tree Stratum (Plot size:	/EGETATION – Use scientific		Danisant ladicates	Dawinana Tast wadahast
1. Che rous arg. Tolia 90 by and that Are OBL, FACW, or FAC:  2. Total Number of Dominant Species Across All Strata:  4. Saplina/Shrub Stratum (Plot size:  1. Che rous as p. 1 by a UPL of the rous o	Tree Stratum (Plot size:			
Total Number of Dominant Species Across All Strata:  4.	1. Quercus ago folio	90	yes upl	
Percent of Dominant Species That Are OBL, FACW, or FAC:    Prevalence Index worksheet:   Total % Cover of:   Multiply by:				Total Number of Dominant
That Are OBL, FACW, or FAC: 25 (A)   Prevalence Index worksheet:   Total % Cover of:   Multiply by:   OBL species   X 1 =   FACW species   Z   X 2 =   4   FACW species   Z   X 2 =   4   FACW species   Z   X 3 =   FACW species   X 4 =   FACW species	3	<del></del>		Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size:	4	90	= Total Cover	Percent of Dominant Species
Total % Cover of: Multiply by:    Total % Cover of: Multiply by:		)		
OBL species	1. queluia St.	2-1	yes upe	
FACW species	2. Buckling glant	the plusars L	yes upe	
FAC species	3			
Second Stratum (Plot size:)   3	···			
Column Totals: 95 (A) 469  Prevalence Index = B/A = 4.9  Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Noody Vine Stratum (Plot size:)  Tendal Cover   Hydrophytic Vegetation    Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation   Vegetation    Hydrophytic Vegetation   Vegetation    Hydrophytic Vegetation   Vegetation    Hydrophytic Vegetation   Vegetation    Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Prevalence Index = B/A		3	= Total Cover	
Prevalence Index = B/A = 4.9  Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation  Prevalence Index = B/A = 4.9  Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index = B/A = 4.9  Hydrophytic Vegetation Indicators:  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation	Herb Stratum (Plot size:	)		
Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Noody Vine Stratum (Plot size:)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation  Fluid Cover Hydrophytic Vegetation	1. Mullin hugea	rigens L	yes you	Column Totals: <u>95</u> (A) <u>46</u> (B)
Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Noody Vine Stratum (Plot size:)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation  Fluid Cover Hydrophytic Vegetation	2			Prevalence Index = B/A = 4.9
Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  ### Hydrophytic Vegetation    Hydrophytic Vegetation   Hydro				
Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  ### Hydrophytic Vegetation    Hydrophytic Vegetation   Hydr				Dominance Test is >50%
data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Total Cover  Hydrophytic Vegetation  Hydrophytic Vegetation				Prevalence Index is ≤3.0 <sup>1</sup>
Problematic Hydrophytic Vegetation (Explain)  Noody Vine Stratum (Plot size:)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  = Total Cover Hydrophytic Vegetation				Morphological Adaptations¹ (Provide supporting
Noody Vine Stratum (Plot size:)	3			
1	Manda Mina Otentian (District)	2	_ = Total Cover	Froblematic Trydrophytic Vegetation (Expidin)
be present, unless disturbed or problematic.  = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
= Total Cover Hydrophytic Vegetation		<del></del>		
			_ = Total Cover	
70 Date Ordana in Flora Character 100 / 10	% Bare Ground in Herh Stratum	% Cover of Biotic (	Crust	Vegetation Present? Yes No
Remarks:				100
Containe.	Normalita:			

Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type¹ Lo	oc <sup>2</sup> Texture Remarks
	Color (Moist) % Type Lo	
-12 10 123/3 100		_ Simily liter.
	, <del></del>	
ne: C=Concentration, D=Depletion, RN	// // // // // // // // // // // // //	nd Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
dric Soil Indicators: (Applicable to al		Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)	
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	<sup>3</sup> Indicators of hydrophytic vegetation and
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Depressions (F8) Vernal Pools (F9)	wetland hydrology must be present,
Sandy Mucky Milleral (S1) Sandy Gleyed Matrix (S4)	Vernal Pools (1.9)	unless disturbed or problematic,
strictive Layer (if present):		Sinoso dietaleos el premiento
Type:		
Denth (inches):		Hydric Soil Present? Yes No
Depth (inches):emarks: Urne obscreed	7	Hydric Soil Present? Yes No
marks: Vivil obscreed		Hydric Soil Present? Yes No
DROLOGY	7	Hydric Soil Present? Yes No
DROLOGY utland Hydrology Indicators:		
DROLOGY Itland Hydrology Indicators: mary Indicators (minimum of one require	ed; check all that apply)	Secondary Indicators (2 or more required
DROLOGY tland Hydrology Indicators: mary Indicators (minimum of one require Surface Water (A1)	ed; check all that apply) Salt Crust (B11)	Secondary Indicators (2 or more required  — Water Marks (B1) (Riverine)
DROLOGY  tland Hydrology Indicators: mary Indicators (minimum of one require Surface Water (A1)  High Water Table (A2)	ed; check all that apply) Salt Crust (B11) Biotic Crust (B12)	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)
DROLOGY  Itland Hydrology Indicators:  mary Indicators (minimum of one require  Surface Water (A1)  High Water Table (A2)  Saturation (A3)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
DROLOGY  Itland Hydrology Indicators:  mary Indicators (minimum of one require  Surface Water (A1) *  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
DROLOGY  Itland Hydrology Indicators:  mary Indicators (minimum of one require Surface Water (A1) *  High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)
DROLOGY  Itland Hydrology Indicators:  Mary Indicators (minimum of one require)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)
DROLOGY  Itland Hydrology Indicators:  Mary Indicators (minimum of one require)  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)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery
DROLOGY  Itland Hydrology Indicators:  mary Indicators (minimum of one require  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 (B	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)
DROLOGY  Itland Hydrology Indicators:  mary Indicators (minimum of one require  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 (E)  Water-Stained Leaves (B9)	ed; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery
DROLOGY  Interpretation (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 (E)  Water-Stained Leaves (B9)	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil 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)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)
DROLOGY  etland Hydrology Indicators: mary Indicators (minimum of one require) 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 (B Water-Stained Leaves (B9)  Ind Observations:  Trace Water Present?  Yes	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)
DROLOGY  Itland Hydrology Indicators:  mary Indicators (minimum of one require  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 (E  Water-Stained Leaves (B9)  Id Observations:  face Water Present?  Yes  ter Table Present?	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
DROLOGY  etland Hydrology Indicators: mary Indicators (minimum of one require  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 (B Water-Stained Leaves (B9)  Ind Observations:  Iface Water Present?  Iter Table Present?  Yes  Liter Table Present?	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)
PROLOGY  etland Hydrology Indicators: mary Indicators (minimum of one require 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 (B Water-Stained Leaves (B9)  eld Observations: rface Water Present?	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
PROLOGY  etland Hydrology Indicators:  mary Indicators (minimum of one require  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 (B  Water-Stained Leaves (B9)  eld Observations:  rface Water Present?  Ater Table Present?  Yes  Coludes capillary fringe)	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
PROLOGY  etland Hydrology Indicators: mary Indicators (minimum of one require 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 (B Water-Stained Leaves (B9)  eld Observations: rface Water Present?	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
DROLOGY  etland Hydrology Indicators: mary Indicators (minimum of one require 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 (B Water-Stained Leaves (B9)  et d Observations: face Water Present?	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
DROLOGY  Itland Hydrology Indicators:  mary Indicators (minimum of one require)  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 (B)  Water-Stained Leaves (B9)  Id Observations:  face Water Present?  ter Table Present?  yes  Luration Present?	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  S (C6) Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
DROLOGY  Itland Hydrology Indicators: mary Indicators (minimum of one require 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 (E) Water-Stained Leaves (B9) Id Observations: face Water Present?  ter Table Present?  yes  uration Present?  Yes  curation Present?  Yes  Cludes capillary fringe)	ed; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No

re climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  re Vegetation  Soil  or Hydrology  significantly disturbed?  No  No  No  No  No  No  No  No  No  N	Subregion (LRR): LRR-C	: Uslope o	locurage Loc	al relief (concave,	convex, none): Loncour Slope (%):  Long: Datum:
### Absolute   Dominant Indicator   Security   Status   Dominant Species   No   More	re climatic / hydrologic conditions on tree Vegetation, Soil, or re Vegetation, Soil, or	he site typical : Hydrology	for this time of year?significantly distunaturally problem	Yes V. No _ urbed? W Are natic? W (If ne	(If no, explain in Remarks.) "Normal Circumstances" present? Yes No eeded, explain any answers in Remarks.)
Absolute % Cover Species? Status  Salins (accing for Species? Status)  Saling (shrub Stratum) (Plot size: Status)  Saling (accing for Species)  Total (cover)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species  A 2 = 40  FACU species  Saling (accing for Species)  FACU species  Saling (accing for Species)  A 2 = 40  FACU species  Saling (accing for Species)  Saling (accing for Species)  Saling (accing for Species)  Total (cover)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species  A 2 = 40  FACU species  A 3 = FACU species  A 4 = UPL species  Saling (accing for Species)  A 4 = UPL species  Prevalence Index = B/A = 4.4  Hydrophytic Vegetation Indicators:  Dominance Test worksheet:  Total Number of Dominant Species  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (a	Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks:	Yes	No 7		and the second s
Absolute % Cover Species? Status  Salins (accing for Species? Status)  Saling (shrub Stratum) (Plot size: Status)  Saling (accing for Species)  Total (cover)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species  A 2 = 40  FACU species  Saling (accing for Species)  FACU species  Saling (accing for Species)  A 2 = 40  FACU species  Saling (accing for Species)  Saling (accing for Species)  Saling (accing for Species)  Total (cover)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species  A 2 = 40  FACU species  A 3 = FACU species  A 4 = UPL species  Saling (accing for Species)  A 4 = UPL species  Prevalence Index = B/A = 4.4  Hydrophytic Vegetation Indicators:  Dominance Test worksheet:  Total Number of Dominant Species  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (accing for Species)  That Are OBL, FACW, or FAC: (a	EGETATION — Use scientific	names of	nlants		
Percent of Dominant Species That Are OBL, FACW, or FAC:    Prevalence Index worksheet:   Total % Cover of:   Multiply by:	ree Stratum (Plot size:	)	Absolute Doi % Cover Spe	ecies? Status	Number of Dominant Species That Are OBL, FACW, or FAC:  Total Number of Dominant
Total % Cover of:   Multiply by:				otal Cover	Percent of Dominant Species
FACU species	Buchain pilala	ú,	5 y	VO FAXW	
Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Problematic Hydrophytic Vegetation¹ (Explain)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  = Total Cover  Hydrophytic Vegetation  Hydrophytic Vegetation	erb Stratum (Plot size:				FACU species $x4 = $ UPL species $x5 = 400$ Column Totals: $100$ (A) $440$ (B
data in Remarks or on a separate sheet)  — Problematic Hydrophytic Vegetation¹ (Explain)  **Total Cover**    Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.    Hydrophytic Vegetation   Hydrophytic					Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹
= Total Cover Hydrophytic Vegetation	Voody Vine Stratum (Plot size:	)	= Tc		data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  Indicators of hydric soil and wetland hydrology must
		y % c			Hydrophytic Vegetation

Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture	Remarks
0-10 \$10184/6 1012		Sand	
2754R3/4		1	
		Loan	
10-12 WRY3 100%		LECOVI	
			7 1,
ط مسلم محمد المسلم	السعوات المستعدد		<u> </u>
Type: C=Concentration, D=Depletion, RM=R			Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LF	RRs, unless otherwise noted.)		ors for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)		m Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)		m Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)		duced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	No. of the last of	d Parent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Oth	ner (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	31, 41:	ors of hydrophytic vegetation and
Thick Dark Surface (A12)	Redox Depressions (F8)		and hydrology must be present,
Sandy Mucky Mineral (S1)	Vernal Pools (F9)		es disturbed or problematic.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):		urnes	is disturbed of problematic.
		Y/I	
Type:	-	11. 15. 6	11 N N N N N N N N N N N N N N N N N N
Depth (inches):			Soil Present? Yes No _X
	1,72		
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		(3 days sweet 2 tinches)
YDROLOGY			
YDROLOGY Vetland Hydrology Indicators:			
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required; o	check all that apply)		condary Indicators (2 or more required)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the control of the con	check all that apply) Salt Crust (B11)		condary Indicators (2 or more required) Water Marks (B1) (Riverine)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; of Surface Water (A1)  High Water Table (A2)	check all that apply) Salt Crust (B11) Biotic Crust (B12)	Se	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the control of the con	check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)	Se	condary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)
YDROLOGY  Netland Hydrology Indicators:  Primary Indicators (minimum of one required; of the surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)	Se	condary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the control of the co	check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L	Se	condary 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)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the control of the con	check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)	Se	condary 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)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the control of the con	check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled	iving Roots (C3)	condary 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)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the control of the con	check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7)	iving Roots (C3)	condary 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)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the control of the con	check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled	iving Roots (C3)	condary 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)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the content of the con	check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)	iving Roots (C3)	condary 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)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the content of the con	check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)	iving Roots (C3)	condary 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)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the content of the con	check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)	iving Roots (C3)	condary 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)
YDROLOGY  Netland Hydrology Indicators:  Primary Indicators (minimum of one required; of the 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)  Field Observations:  Surface Water Present?  Yes   No  Water Table Present?	check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks) Depth (inches): Z " Depth (inches): Z "	iving Roots (C3)	condary 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)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the content of the co	Sheck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	iving Roots (C3) Soils (C6) Wetland Hydrol	condary 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)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the content of the co	Sheck all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	iving Roots (C3) Soils (C6) Wetland Hydrol	condary 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)
YDROLOGY  Netland Hydrology Indicators:  Primary Indicators (minimum of one required; of   ✓ 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)  Field Observations:  Surface Water Present?  Vater Table Present?	Sheck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):	Seiving Roots (C3) Soils (C6) Wetland Hydrolections), if available:	condary 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)  ogy Present? Yes No
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of   ✓ 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)  Field Observations:  Surface Water Present?  Water Table Present?  Yes ✓ No  Saturation Present?  Yes ✓ No  Saturation Present?  Surface Recorded Data (stream gauge, monit	Sheck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):	Seiving Roots (C3) Soils (C6) Wetland Hydrolections), if available:	condary 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)  ogy Present? Yes No
YDROLOGY  Netland Hydrology Indicators:  Primary Indicators (minimum of one required; of   ✓ 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)  Field Observations:  Surface Water Present?  Vater Table Present?	Sheck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):	Seiving Roots (C3) Soils (C6) Wetland Hydrolections), if available:	condary 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)  ogy Present? Yes No
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the content of the co	Sheck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):	Seiving Roots (C3) Soils (C6) Wetland Hydrolections), if available:	condary 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)  ogy Present? Yes No
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; of the content of the co	Sheck all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along L  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):	Seiving Roots (C3) Soils (C6) Wetland Hydrolections), if available:	condary 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)

W	ETLAND DETI	ERMINATI	ION DA	TA FORM	- Arid West Region	in	,
Project/Site: Nalley Cente			Citv/Cou	ntv: Sant	Viso Counts	Sampling Date:	3/1/
Applicant/Owner: AB, GAS							
Investigator(s):	1				ange:		
Landform (hillslope, terrace, etc.): //-	11 close deal	ace	Local re	lief (concave.	convex. none): Conc	ave si	ope (%):
Subregion (LRR): LRR - C	The state of the s						
Soil Map Unit Name: Sleep Gul							
Are climatic / hydrologic conditions on	/						
	and the same of th						No
Are Vegetation, Soil, or				1			NO
Are Vegetation, Soil, or							
SUMMARY OF FINDINGS - A	Attach site map	showing	sampl	ling point l	locations, transect	s, important fe	eatures, etc.
Hydrophytic Vegetation Present?	Yes	No					
Hydric Soil Present?	Yes			the Sample			
Wetland Hydrology Present?	Yes	No	W	ithin a Wetla	na? Yes	No	-
Remarks:							
VEGETATION – Use scientific	names of nla	nte					
VEGETATION - 03c Scientific	Tidines of pia	Absolute	Domina	ant Indicator	Dominance Test wor	rksheet:	
Tree Stratum (Plot size:	)	(A. A. A. C.		s? Status	Number of Dominant		1
1					That Are OBL, FACW		(A)
2					Total Number of Dom	inant	2
3			<del></del>		Species Across All Str	rata:	(B)
4			T-1-17		Percent of Dominant S		(
Sapling/Shrub Stratum (Plot size:	)		= Total (	Cover	That Are OBL, FACW	, or FAC:	(A/B)
1. Yucca schidiacea		2	HO	UPL	Prevalence Index wo	rksheet:	
2. Aitemisia californ	nica	_ 33_	yez	UPL	Total % Cover of:		ly by:
3. Mimilus arrenticos	5	_5_	No	LUPL	OBL species		
4			-		FACW species		
5,		40			FAC species		
Herb Stratum (Plot size:	)	40	= Total (	Cover	FACU species UPL species	x4= )O x5= 4	400
	Carduus sp.	40	Wes	UPL	0. 2 sposies	X3	500 (B)
2. Bromus made tensis		10	00	UPL	Coldinii Totais		(=)
3. Claytonia sp.		3	No.	LIPL	Prevalence Inde		10
4. Hirschfeldia	(Q		No	UPL	Hydrophytic Vegetat		
5. Parania californica	a		No	INPL	Dominance Test i		
6					Prevalence Index		
7						aptations¹ (Provide ks or on å separate	
8					Problematic Hydro		
Woody Vine Stratum (Plot size:	)	23	= Total C	Jover			
1. Lonivera Subspice		_5	Wes	UPL	<sup>1</sup> Indicators of hydric so		
2			- 0		be present, unless dis	turbed or problema	itic.
		5	= Total C	Cover	Hydrophytic		
% Bare Ground in Herb Stratum	Ø % Cove	er of Biotic Cr	rust		Vegetation Present?	es No_	X
				shal si	rub Vege tati		-
	2	IN CAUB	11116	3.00	100 Vege AT		
Bank to bank NS	SFF						

hydrology present; Epheneral chamage in upland. Indicators ACDE - non-welland water COFG - Stream bed

Remarks:

#### WETLAND DETERMINATION DATA FORM - Arid West Region Applicant/Owner: Accretive State: CA Sampling Point: Ila Investigator(s): 6- Scheiel Section, Township, Range: \_\_\_\_ Landform (hillslope, terrace, etc.): hill slope change Local relief (concave, convex, none): / on caul Slope (%): 5 Subregion (LRR): LRR-C Soil Map Unit Name: Steep bullered Land/ Fallbrook Sandy Loan NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.) Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Pa 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? Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: VEGETATION – Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: \_\_\_\_) % Cover Species? Status Number of Dominant Species 1. Novo That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species \_\_\_\_\_ = Total Cover That Are OBL, FACW, or FAC: (A/B) Sapling/Şhrub Stratum (Plot size: \_\_\_\_) 1. Dreversia californica Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species \_\_\_\_\_ x 1 = \_\_\_\_ FACW species \_\_\_\_\_ x 2 = \_\_\_\_ FAC species \_\_\_\_\_ x 3 = \_\_\_\_ FACU species \_\_\_\_\_ x 4 = \_\_\_\_ Total Cover UPL species 100 x 5 = 500 Herb Stratum (Plot size: Column Totals: \_\_\_\_\_\_\_(A) \_\_\_\_\_\_\_(B) Prevalence Index = B/A = 5.0 Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤3.0¹ \_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) = Total Cover Woody Vine Stratum (Plot size: \_\_\_\_) <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic = Total Cover Vegetation % Bare Ground in Herb Stratum \_\_\_\_\_\_ % Cover of Biotic Crust \_\_\_\_\_

Present?

Profile Des	scription: (Describe to	the depth	needed to docur	ment the	indicator	or confirm	the absence of	indicators.)
Depth	Matrix			x Feature				D. T. J. C. W. T.
(inches)	Color (moist)	<u>%</u> -	Color (moist)	%	Type <sup>1</sup>	Loc	Texture _	Remarks
7-17	10 /R 3/3	100%		,		Sand	wan -	
Гуре: С=С	Concentration, D=Deplet	ion, RM=F	Reduced Matrix, CS	S=Covered	d or Coate	d Sand Gra		on: PL=Pore Lining, M=Matrix.
	Indicators: (Applicab						Indicators for	Problematic Hydric Soils <sup>3</sup> :
_ Histoso			Sandy Redo					k (A9) (LRR C)
	pipedon (A2)		Stripped Ma		<del></del>			k (A10) (LRR B)
	Histic (A3)		Loamy Muc Loamy Gley					Vertic (F18) nt Material (TF2)
	en Sulfide (A4) ed Layers (A5) (LRR C)		Depleted Ma		(Г2)			plain in Remarks)
	luck (A9) (LRR D)		Redox Dark		F6)		0.0.0. (2.0	plant in the market
	ed Below Dark Surface (	A11)	Depleted Da					
	Park Surface (A12)		Redox Depr		<del>-</del> 8)			nydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Pool	s (F9)				Irology must be present,
	Gleyed Matrix (S4)  Layer (if present):						uniess distu	rbed or problematic.
	Layer (II present).							A
Type: Depth (in	a de sa Vi		_				Hydric Soil Pre	esent? Yes No
	on obsined	1						D 2110/12/2017
VDDOL C	nc.v							
DROLC								
	/drology indicators:	and a silver of	shook all that apply	Á			Sacanda	ry Indicators (2 or more required)
	icators (minimum of one	required;		C-6-0-00				
	Water (A1)		Salt Crust	Charles and a				er Marks (B1) (Riverine) ment Deposits (B2) (Riverine)
	ater Table (A2) ion (A3)		Biotic Crus Aquatic Inv		(R13)			Deposits (B3) (Riverine)
	Marks (B1) ( <b>Nonriverine</b>	1	Hydrogen \$					nage Patterns (B10)
The second secon	ent Deposits (B2) (Nonri					Livina Roots		Season Water Table (C2)
	posits (B3) (Nonriverine		Presence of					fish Burrows (C8)
	Soil Cracks (B6)	,				Soils (C6)		ration Visible on Aerial Imagery (C9
	ion Visible on Aerial Ima	igery (B7)	Thin Muck					ow Aquitard (D3)
	Stained Leaves (B9)		Other (Exp				FAC-	-Neutral Test (D5)
ield Obser								
urface Wat	ter Present? Yes	No	Depth (inc	ches):				
ater Table	Present? Yes	No	Depth (inc	ches):				
aturation P		No	Depth (inc	ches):		Wetlar	id Hydrology Pi	resent? Yes No 💹
ncludes ca	pillary fringe) ecorded Data (stream ga	uge. moni	toring well, aerial n	hotos, pre	evious insi	pections), if	available:	
			<u> </u>			***		
omarka:	bladeter.	1.	- / / -		( ,	1.	11	1 1
emarks:		1 45 011	-114 16 11 DS	11111	60	111000 000	din.	00 V 2 2/11 2/1.
ernains.	00 100/01/09/9	Vacca	6147000		. 4	- Concac	2 - 6000	as way tener.
/	on fear z -	5 44	CDFG	54.	. 4	1	2 3000	La state Tiel
emarks. J	on flow 3-	5 Ft.	CDF6	5 tree	in be	A S	is of ted	age in up lenol. downstream offsite

Project/Site: Las Lilas	5	City/County: San	Digo Loury Sampling Date: 3/1/1
Applicant/Owner: Accretise			State: CA Sampling Point: 116
Investigator(s): 6- Scheie			ange:
Landform (hillslope, terrace, etc.): \\\id (	Slope drainge		convex, none): Concari Slope (%): 9
			Long: Datum:
Soil Map Unit Name: 5 100 (2.11	ort Land / Fall har	ok sanda la	NWI classification:
		0	(If no, explain in Remarks.)
			"Normal Circumstances" present? Yes No
			eeded, explain any answers in Remarks.)
			locations, transects, important features, etc
		Jamping Panti	
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes No Yes No	Is the Sampled	
Wetland Hydrology Present?	Yes No	within a Wetlan	nd? Yes No
		1 -1	1.1.01.1.0
Remarks: Vize takion at L	ow end of on site	partion ou	stute / Ellare
VECETATION III			
VEGETATION – Use scientific		B	15.
Tree Stratum (Plot size:	Absolute	Dominant Indicator Species? Status	Dominance Test worksheet:  Number of Dominant Species
1. Overcus agrifol			That Are OBL, FACW, or FAC:(A)
2			Total Number of Dominant
3			Species Across All Strata: Z (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:		= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1. Bacchair Salicing	loca 5%	Us Bew	Prevalence Index worksheet:
2		0 -	Total % Cover of:Multiply by:
3			OBL species x 1 =
4			FACW species 5 x 2 = 10
5		¥ 0.11 6	FAC species x 3 =
Herb Stratum (Plot size:	)	= Total Cover	FACU species x 4 =
1,			Column Totals: $10$ (A) $35$ (B)
2			
3			Prevalence Index = B/A = 3.5
4			Hydrophytic Vegetation Indicators:
5			Dominance Test is >50%
6			<ul> <li>Prevalence Index is ≤3.0¹</li> <li>Morphological Adaptations¹ (Provide supporting</li> </ul>
7			data in Remarks or on a separate sheet)
0.		= Total Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:		- Total Covel	
1			¹Indicators of hydric soil and wetland hydrology must
2			be present, unless disturbed or problematic.
.72	<i></i> :	= Total Cover	Hydrophytic Vegetation
% Bare Ground in Herb Stratum	% Cover of Biotic Cru	ust	Present? Yes No X
Remarks: // Occ	bornely repaired	1 67	7
UES CREAMO,	repaired repaired	or uplend!	

Sandy Mucky Mineral (S1) \_\_\_\_ Vernal Pools (F9)
Sandy Gleyed Matrix (S4)

Restrictive Layer (if present):

Type: \_\_\_\_
Depth (inches):

No hydric sort indicators observed

HYDROLOGY

Remarks:

Primary Indicators (minimum of one required; c	2.7.1.1.1.1.1.2.1.1.1.1.1.1.1.1.1.1.1.1.	Secondary Indicators (2 or more required)
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Li	iving Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled	Soils (C6) Saturation Visible on Aerial Imagery (C
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No	Depth (inches):	
Water Table Present? Yes No	Depth (inches):	-
(includes capillary fringe)	Depth (inches):	Wetland Hydrology Present? Yes No X
Describe Recorded Data (stream gauge, monitor	oring well, aerial photos, previous inspe	pections), if available:
Remarks: 6/22/1/	111111111	1 1 1
They from and a	t bo for of on-sile	segwent of diamage
	0	N <sub>1</sub>
me che but -		Ephemeica.
10 - Strawarde	nd == = 1	11 - 17
our Dul - Bolare	e ( www s pulling of	price c

Hydric Soil Present? Yes

Applicant/Owner: According State: State: Sampling Point: Investigator(s): G-School   Section, Township, Range: Loadform (hillslope, terroce, stc.): **Millslope drawage   Local relief (concave, convex, none): **Carcal   Slop Subregion (LRR): Let: Long: Deturn Soil Map Unit Name: **Fall boook School Loam   NWI classification: NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes   No   (If no. explain in Remarks.) Are Vegetation   Soil   or Hydrology   significantly disturberd ## Are "Normati Circumstances" present? Yes   Are Vegetation   Soil   or Hydrology   naturally problematic? **No (If no. explain in Remarks.) **SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important fea   Hydrophytic Vegetation Present?   Yes   No   Wetland Hydrology Present?	3/1/1
Section, Township, Range:   Section, Township, Range:   Solon, Township, Range:   Solon, Township, Range:   Solon, Township, Range:   Solon, Township, Range:   Landform (hillslope, terrace, etc.):	
Landform (hillslope, terrace, etc.): hillshop damage Local relief (concave, convex, none):	
Subregion (LRR): Long: Datum Soil May Unit Name: Fall book & Sandy Locum NWI classification:  Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)  Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes Are Vegetation Soil or Hydrology and antivally problematic? Are full for explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important fea Hydrophytic Vegetation Present? Yes No Wetland Hydrology Present? Yes N	(%): 乙
No   Cover   Species   Status   Species   Across All Strata:   Zecover   Species   Status   Species   Status   Species   Status   Species   Status   Species   Across All Strata:   Zecover   Species   Status   Species   Status   Species   Across All Strata:   Zecover   Species   Status   Species   Across All Strata:   Zecover   Species   Status   Speci	
No	
Soli	
Soli	No
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important feather the properties of t	_ 100
Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Hydrophytic Vegetation Present? Yes No Wetland Hydrology Present?  Yes No Wetland?  Wetland Present?  Wetland Hydrology Present?  Wetland Hydrology Present?  Wetland Hydrology Present?  Yes No Wetland?  No Wetland?  Wetland Present?  No Wetland Present Wetland Present	uras at
Hydric Soil Present?  Wetland Hydrology Present.  Dominance Test worksheet:  Number of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FAC:  Wumber of Dominant Species  That Are OBL, FACW, or FA	4103, 00
Remarks:	
Remarks:   Visit fection Cleared for agricultural purposes of fuel break   Section Cleared for agricultural purposes   Section Cleared for agricultural purp	
Absolute   Dominant Indicator   Species   Status   Number of Dominant Species   That Are OBL, FACW, or FAC:   Dominant Species   Total Number of Dominant Species   That Are OBL, FACW, or FAC:   Dominant Species   That Are OBL, FACW	
Number of Dominant Species   Status   Total Number of Dominant Species   That Are OBL, FACW, or FAC:   Total Number of Dominant Species Across All Strata:   Z	
1.	
Total Number of Dominant Species Across All Strata:   2	(A)
Species Across All Strata:   Z	(^)
Percent of Dominant Species   That Are OBL, FACW, or FAC:   Prevalence Index worksheet:   Total % Cover of:   Multiply	(B)
Sapling/Shrub Stratum   Plot size:	(5)
1.   None   Prevalence Index worksheet:   Total % Cover of:   Multiply	(A/B
Total % Cover of: Multiply	
3	y:
FACW species   x 2 =   FAC species   x 3 =   FAC species   x 3 =   FACU species   x 4 =	
= Total Cover    Herb Stratum (Plot size:)   30 Ues upc   UPL species x 4 =	
Herb Stratum (Plot size:)   1.   Promus diaudius   30   U65   UPL     2.   Rumica piera   5   No   UPL     3.   Prevalence Index = B/A =   5 . 0     4.   Hydrophytic Vegetation Indicators: Dominance Test is >50%     6.   Prevalence Index is ≤3.0¹     7.   Morphological Adaptations¹ (Provide sidata in Remarks or on a separate sidata in Remarks or o	
1. Promus diaudius 2. Brisina piera 3. Prevalence Index = B/A = 5.0 4. Hydrophytic Vegetation Indicators:	
2. Brissica piera  3.	
Prevalence Index = B/A =	)(B)
Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide si data in Remarks or on a separate sl problematic Hydrophytic Vegetation¹ (E	)
Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide st data in Remarks or on a separate st data in Remarks or on a separate st Problematic Hydrophytic Vegetation¹ (E	
Morphological Adaptations¹ (Provide su data in Remarks or on a separate si Problematic Hydrophytic Vegetation¹ (E	
data in Remarks or on a separate si  Problematic Hydrophytic Vegetation <sup>1</sup> (E  Woody Vine Stratum (Plot size:)  1.   data in Remarks or on a separate si  Problematic Hydrophytic Vegetation <sup>1</sup> (E	
8	oporting
Woody Vine Stratum (Plot size:)  1.	
1. Indicators of hydric soil and wetland hydrol	spiairi)
	av must
De present, unless disturbed of problematic	
2 = Total Cover Hydrophytic	
% Bare Ground in Herb Stratum % Cover of Biotic Crust Present? Yes No	
Remarks:	

Yes No X Depth (inches):

Surface Water Present?

Project/Site: Valley Center	City/0	County: 56,25	Sampling Date: 3/1/11
Applicant/Owner:			State: <u>UA</u> Sampling Point: <u>13</u>
Investigator(s): AIB, GAS, ESM			
Landform (hillslope, terrace, etc.): Flat land			
Subregion (LRR): LRR-L			
Soil Map Unit Name: Fallbrock Sandy Loan			
Are climatic / hydrologic conditions on the site typical for this tin	ne of year?	es X No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signi			
Are Vegetation, Soil, or Hydrology natu		0,	그렇게 그렇게 다시 그리다 그 아이를 내려가 하는데 그리고
SUMMARY OF FINDINGS – Attach site map sho			
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Yes No		Is the Sampled within a Wetlan	1/
Remarks: Site is disturbed due to inva at this location would sup	sive pe	Ins. Wella bigphy fix i	and hy dwlosy and hydric soils
VEGETATION – Use scientific names of plants.			
	solute Don Cover Spe	ninant Indicator cies? Status	Dominance Test worksheet:
1. Washinstonia robusta	00 4	4 FAW	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2. Phackix canaciensis	20 J	es UPL	Total Number of Dominant Species Across All Strata:(B)
4	<u></u>	tal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:)	5 4	& FALW	Prevalence Index worksheet:
	K	5 THOO	Total % Cover of: Multiply by:
2			OBL species x 1 =
			FACW species 75 x 2 = 150
5			FAC species x 3 =
_	/5 = To	tal Cover	FACU species x 4 =
Herb Stratum (Plot size:)			UPL species
1			Column Totals:/00 (A)375 (B)
2			Prevalence Index = B/A = 3.75
4.			Hydrophytic Vegetation Indicators:
5			Dominance Test is >50%
6			Prevalence Index is ≤3.0 <sup>1</sup>
7			Morphological Adaptations <sup>1</sup> (Provide supporting
8			data in Remarks or on a separate sheet)
Manda Vine Statum (Dist -i	= Tot	al Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:)  1grape ( Norm - nature)	5 W	6 UPL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2.		3 010	be present, unless disturbed or problematic.
d -		al Cover	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Cover of E			Present? Yes No
Remarks: interflourial. Channel N 15 , Natural Vegetation disturbed du de is	Peet au	Dalms.	nk to bank N6 feet

Personal Estate Patrick And Language Co. 12, 21, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,	ptn needed to docume	ent the indicato	r or confirm	n the absence of	findicators.)
Depth Matrix		Features		200000	4.0.00
inches) Color (moist) %	Color (moist)	% Type	Loc <sup>2</sup>	Texture	Remarks
7-16 10YR2-7 94				loan _	
<u> </u>	6/ey/ 25-N	1	M		
<-X	54R-3-4	5 D	PL	/	
			-		
				<del></del>	
			-	-	
ype: C=Concentration, D=Depletion, RM	1=Reduced Matrix, CS=	Covered or Coa	ted Sand G		ion: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all					r Problematic Hydric Soils <sup>3</sup> :
_ Histosol (A1)	Sandy Redox				ck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matr				ck (A10) ( <b>LRR B</b> ) Vertic (F18)
_ Black Histic (A3)	Loamy Mucky	/ Mineral (F1)			ent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Mat				rplain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark S				
Depleted Below Dark Surface (A11)		k Surface (F7)			
_ Thick Dark Surface (A12)	Redox Depre				hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Vernal Pools	(F9)			drology must be present,
Sandy Glayed Matrix (SA)				uniess dist	urbed or problematic.
_ Sandy Gleyed Matrix (S4)			_	1	
estrictive Layer (if present):					
estrictive Layer (if present):  Type:				Hydric Soil Pr	resent? Yes X No
estrictive Layer (if present):	res may b	se orga	nie m		resent? Yes X No
estrictive Layer (if present):  Type:  Depth (inches):  emarks: Olack ridux feature	res may l	ge orga	nie pr		
Type:	res may b	ge orga	nie m		
Type:		se orga	mie m	interval (	laves)
Depth (inches):  Depth	id; check all that apply)		nie m	seconda	ary Indicators (2 or more required)
Depth (inches):  Depth	id; check all that apply) Salt Crust (B	311)	nie m	Seconda	ary Indicators (2 or more required) er Marks (B1) (Riverine)
Depth (inches):  Depth (inches):  Depth (inches):  Depth (inches):  DROLOGY  etland Hydrology Indicators:  imary Indicators (minimum of one require)  Surface Water (A1)  High Water Table (A2)	id; check all that apply) Salt Crust (B Biotic Crust	311) (B12)	nie m	Seconda Wat Sed	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine)
DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3)	d; check all that apply)  Salt Crust (B Biotic Crust Aquatic Inve	811) (B12) rtebrates (B13)	mie m	Seconda  Wat  Sed  Drift	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine)
DROLOGY  etland Hydrology Indicators: imary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	id; check all that apply)  Salt Crust (B Biotic Crust of Aquatic Inve	311) (B12) rtebrates (B13) ulfide Odor (C1)		Seconda  Wat Sed Drift Drai	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine)
Depth (inches):  Depth (inches):  Depth (inches):  Demarks:  DACK (COX Pent)  DROLOGY  etland Hydrology Indicators:  imary Indicators (minimum of one require)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	id; check all that apply)  Salt Crust (B Biotic Crust ( Aquatic Inve Hydrogen St Oxidized Rh	811) (B12) rtebrates (B13)	g Living Roc	Seconda  Wat Sed Drift Draits (C3) Dry-	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10)
Depth (inches):  Depth (inches):  Demarks:  DROLOGY  etland Hydrology Indicators:  imary Indicators (minimum of one require)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	id; check all that apply)  Salt Crust (B  Biotic Crust on Aquatic Inveous of Advanced Rhim Presence of	311) (B12) rtebrates (B13) ulfide Odor (C1) izospheres alon	g Living Roc 24)	Seconda  Wat Sed Drift Drai ots (C3) Cray	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8)
DROLOGY  etland Hydrology Indicators: imary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	id; check all that apply)  Salt Crust (B Biotic Crust on Aquatic Inveous Advisority Advi	811) (B12) rtebrates (B13) ulfide Odor (C1) izospheres alon; Reduced Iron (C	g Living Roc 24)	Seconda  Wat  Sed  Drift  Drai  ots (C3) Dry-  Cray  Satu	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8)
DROLOGY  etland Hydrology Indicators: imary Indicators (minimum of one require) 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 (B	d; check all that apply)  Salt Crust (B Biotic Crust (B Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Thin Muck S	811) (B12) rtebrates (B13) ulfide Odor (C1) izospheres alon; Reduced Iron (C	g Living Roc 24)	Seconda  Wat Sed Drift Drai ots (C3) Satu Sha	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) uration Visible on Aerial Imagery (
Depth (inches):  Depth (inches):  Demarks:  DIACK (COX Pent of Cox	d; check all that apply)  Salt Crust (B Biotic Crust (B Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Thin Muck S	(B12) rtebrates (B13) ulfide Odor (C1) izospheres alon Reduced Iron (C Reduction in Till urface (C7)	g Living Roc 24)	Seconda  Wat Sed Drift Drai ots (C3) Cray Satu Sha	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) offish Burrows (C8) uration Visible on Aerial Imagery (Clow Aquitard (D3)
Depth (inches):  Depth (inches):  Demarks:  DIACK  CLOX  Depth (inches):  Demarks:  DIACK  CLOX  Depth (inches):  Demarks:  DIACK  CLOX  Depth (inches):  Depth	d; check all that apply)  Salt Crust (B Biotic Crust (B Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Thin Muck S	s11) (B12) rtebrates (B13) ulfide Odor (C1) izospheres alon- Reduced Iron (C Reduction in Till urface (C7) in in Remarks)	g Living Roc 24)	Seconda  Wat Sed Drift Drai ots (C3) Cray Satu Sha	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) offish Burrows (C8) uration Visible on Aerial Imagery (Clow Aquitard (D3)
Depth (inches):  Depth (inches):  Demarks:  DIACK (COX Pent)  Depth (inches):  Demarks:  DIACK (COX Pent)  Depth (inches):  Diff Deposits (minimum of one require  Dariface Water (A1)  Depth (inches):  Depth (in	id; check all that apply)  Salt Crust (B Biotic Crust (B Aquatic Inve Hydrogen St Coxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	(B12) rtebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C) Reduction in Till urface (C7) in in Remarks)	g Living Roc 24)	Seconda  Wat Sed Drift Drai ots (C3) Cray Satu Sha	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) offish Burrows (C8) uration Visible on Aerial Imagery (Clow Aquitard (D3)

Project/Site: Valley Centur		City/County: <u>San</u>	vias County	_ Sampling Date: 3/1//1
				Sampling Point: 14
Investigator(s): AIB GAS EJM		Section, Township, R	ange:	
Landform (hillslope, terrace, etc.):		Local relief (concave,	convex, none):	we Slope (%):
Subregion (LRR): LRR-C	Lat:		_ Long:	Datum:
Soil Map Unit Name: Fallbrook sandy (				
Are climatic / hydrologic conditions on the site typical fo				
Are Vegetation, Soil, or Hydrology				
Are Vegetation, Soil, or Hydrology				
SUMMARY OF FINDINGS – Attach site m				
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Yes  Yes	No	Is the Sample within a Wetla		No
Remarks: Open area of Oak Figure wood whis location.	larel Migel	ation disturbed	I as week and sh	rabs removed Fran
VEGETATION – Use scientific names of p	lants.			
Tree Stratum (Plot size:) 1		Dominant Indicator Species? Status	Number of Dominant That Are OBL, FACW	Species
2			Total Number of Domi Species Across All Str	inant ,
4. Sapling/Shrub Stratum (Plot size:)		= Total Cover	Percent of Dominant S That Are OBL, FACW	
1			Prevalence Index wo	orksheet:
2.			Total % Cover of:	Multiply by:
3.			OBL species	x 1 =
4			FACW species	x 2 =
5				x 3 =
Hart Olaria (District)		= Total Cover		x 4 =
Herb Stratum (Plot size:)  1. Rarripa nasty/fivm-aquatica	93	yes new	The state of the s	x 5 =
2. Celesy - Apin crawlaters		No FACW	Column Totals:	(A) (B)
3. Cach Sp.	5	No FACE	Prevalence Inde	x = B/A =
4. Souchis oleraceus		No UPL	Hydrophytic Vegetat	ion Indicators:
5.			Dominance Test i	s >50%
6			Prevalence Index	is ≤3.0 <sup>1</sup>
7			Morphological Ad	aptations <sup>1</sup> (Provide supporting
8				ks or on a separate sheet) ophytic Vegetation¹ (Explain)
Mandy Vine Status (District)	100	= Total Cover	Froblematic riyard	opnytic vegetation (Explain)
Woody Vine Stratum (Plot size:)			<sup>1</sup> Indicators of hydric so	oil and wetland hydrology must
1			be present, unless dis	
2		= Total Cover	Hydrophytic Vegetation	· · ·
% Bare Ground in Herb Stratum % Co			Present? Yo	es <u> </u>
Remarks: full sun bordrock by 00	Wr. parau	woodland.	Disturbed 1.	pariam habitat

_	-		
	fη		
•	u	ш	_

Sampling Point: 14

Profile Description: (Describe to the depth needed to document the indicator or or Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Type' L	Loc <sup>2</sup> Texture Remarks
8-4 7.5 / R 4-6 106	Sand _
4-16 104R 2-1 100	1am.
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated S	and Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1) Sandy Redox (S5)	1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
Histic Epipedon (A2)  Black Histic (A3)  Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Black Histic (A3)	Red Parent Material (TF2)
Stratified Layers (A5) (LRR C) Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)	- Sabel Antigenal and comment
Depleted Below Dark Surface (A11)  Depleted Dark Surface (F7)	
Thick Dark Surface (A12) Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Vernal Pools (F9)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	unless disturbed or problematic.
Restrictive Layer (if present):	
Type:	V
Depth (inches):  Remarks: Black organic matter in 4-1611 layer n	Hydric Soil Present? Yes X No
Depth (inches):  Remarks: Black organic mafter in 4-1611 layer in  YDROLOGY	
Depth (inches):  Remarks: Black organic mafter in 4-1611 layer in  YDROLOGY  Vetland Hydrology Indicators:	natrix. No redox Deathres observe
Depth (inches):  Remarks: Black organic maffer in 4-1611 layer in  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Depth (inches):  Remarks: Black organic maffer in 4-/611 layer in  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1) Salt Crust (B11)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Depth (inches):  Market Table (A2)  Depth (inches):  Market Table (A2)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Semarks: Black organic maffer in 4-/6 il layer i	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Semarks: Black organic maffer in 4-/6 ii layer in	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
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) Sediment Deposits (B2) (Nonriverine)  Semarks: Black organic maffer in H-/6 II layer in Marks (B1) (Nonriverine)  Saturation (A4)  High Water Table (A5) Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3)  Dry-Season Water Table (C2)
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)  Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required)  — Water Marks (B1) (Riverine)  — Y Sediment Deposits (B2) (Riverine)  — Drift Deposits (B3) (Riverine)  — Drainage Patterns (B10)  Ing Roots (C3)  — Dry-Season Water Table (C2)  — Crayfish Burrows (C8)
Process  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)  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sci	Secondary Indicators (2 or more required)  — Water Marks (B1) (Riverine)  — Y Sediment Deposits (B2) (Riverine)  — Drift Deposits (B3) (Riverine)  — Drainage Patterns (B10)  Ing Roots (C3)  — Dry-Season Water Table (C2)  — Crayfish Burrows (C8)  — Saturation Visible on Aerial Imagery (C9)
Prince Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Prince Water (C1)  Author Marks (C1)  Author Marks (C2)  Saturation (C2)  Presence of Reduction in Tilled Science (C7)	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)
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 (Imagery Indicators) Water Marks (B9)  Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Science (C7) Water-Stained Leaves (B9)  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)  Ing Roots (C3)  — Dry-Season Water Table (C2)  — Crayfish Burrows (C8)  — Saturation Visible on Aerial Imagery (C9)
Print Depth (inches):    Continue   Continue	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)
Prince 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)  Surface Water Present?  Water Marks (B9)  Depth (inches):  Water Marks (B1) (Nonriverine)  Drift Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Depth (inches):  Depth (inches):	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)
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)  Water Table (Present?  Ves No Depth (inches):  Water Table Present?  No Depth (inches):	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)
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)  Water Table Present? Ves No Depth (inches): Saturation Present? Saturation Present? Ves No Depth (inches): Saturation Present? Ves No Depth (inches):	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)  Wetland Hydrology Present? Yes No
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)  Water Table (Present?  Water Table (Present)  Water (Marks)  Water (Marks)  Surface (Marks)  Surface (Marks)  Water (Marks)  Surface (Marks)  Water (Marks)  Surface (Marks)  Surface (Marks)  Water (Marks)  Surface (Marks)  Water (Marks)  Surface (Marks)  Water (Marks)  Surface (Marks)  Water (	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)  Wetland Hydrology Present? Yes No
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)  Water Present?  Water Table Present?  Yes No Depth (inches): Staturation Present? Yes No Dep	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)  Wetland Hydrology Present? Yes No
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)  Water Table Present?  Yes No Depth (inches): Saturation Preserice of Recorded Data (stream gauge, monitoring well, aerial photos, previous inspectively accorded to the process of the control of the process of the control of the process of the control of the process of the	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)  Wetland Hydrology Present? Yes No
Portion (inches):	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)  Wetland Hydrology Present? Yes No

Project/Site: Value Cande			City/Cor	into Sc. D	pan Counter	Sampling Date: 3/1/	
Project/Site: Vally Center Applicant/Owner:		***************************************	Jity/OUL	arrey	State: CA	Sampling Point: 15	
Investigator(s): AIR GAS	ETM		State: Sampling Point: Section, Township, Range:				
Landform (hillslope, terrace, etc.):							
Subregion (LRR):							
Soil Map Unit Name: 5 Lee bu							
		/		A-3			
Are climatic / hydrologic conditions on t							
Are Vegetation, Soil, or							
Are Vegetation, Soil, or	Hydrology	naturally pro	oblematic	c? (If no	eeded, explain any answer	s in Remarks.)	
SUMMARY OF FINDINGS – A	ttach site m	ap showing	samp	ling point l	ocations, transects	important features,	
Hydrophytic Vegetation Present?	Yes X	No	le le	s the Sampled	I Araa	,	
Hydric Soil Present? Wetland Hydrology Present?	Yes	No K			nd? Yes	No X	
Wetland Hydrology Present?  Remarks: Vacatatut Support	Yes	No K		Tumi a Would	103		
/EGETATION – Use scientific	names of p	lants.					
		Absolute		ant Indicator	Dominance Test works	sheet:	
Tree Stratum (Plot size:					Number of Dominant Sp		
1. Lashingtonia robust			- Jes	Freeze	That Are OBL, FACW, o	r FAC: (A	
2			*		Total Number of Domina		
4					Species Across All Strat	15	
		5	= Total	Cover	Percent of Dominant Sp That Are OBL, FACW, o		
Sapling/Shrub Stratum (Plot size:					Prevalence Index work		
1					A STATE OF THE STA	Multiply by:	
2						x 1 =	
4.						x 2 =	
5					FAC species	x 3 =	
		1	= Total	Cover	FACU species	x 4 =	
Herb Stratum (Plot size:	)	9	die	FAC		x 5 =	
2. Caropbrotus edulis		10	Do	UPL	Column Totals:	(A) (	
3. Bromus d'andrus		- 5	No	UPL	Prevalence Index	= B/A =	
4.					Hydrophytic Vegetatio	n Indicators:	
5					Dominance Test is :		
6					Prevalence Index is		
7				أسيدك		stations <sup>1</sup> (Provide supporting or on a separate sheet)	
8		-0/				hytic Vegetation <sup>1</sup> (Explain)	
Woody Vine Stratum (Plot size:	Ì	75	= Total	Cover		, , , , , , , , , , , , , , , , , , , ,	
1.						and wetland hydrology mus	
2.					be present, unless distu	bed or problematic.	
	/		= Total	Cover	Hydrophytic		
% Bare Ground in Herb Stratum	) % Cc	over of Biotic Cr	rust		Vegetation Present? Yes	X No	
Remarks:						**	

	Sampling Point: _	15	
e of ind	icators.)		

// - L \ O	Matrix			ox Features				2.3.44
	olor (moist)		Color (moist)	%	Type <sup>1</sup>	_Loc²	Texture	Remarks
D-16 10)	/R 3-3	100_					Sand	- N-
			a_x_,		-			and the second second second second
<del></del>								-,
								_\_
		<del></del>						
						10-75	. 2.	
Type: C=Concent	tration, D=Dep	letion, RM=R	educed Matrix, C	S=Covered	or Coate	d Sand Gr		Location: PL=Pore Lining, M=Matrix.
lydric Soil Indica	tors: (Applica	able to all Li			ea.)			ors for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	v stran		Sandy Red					m Muck (A9) (LRR C)
Histic Epipedo			Stripped M		(E4)			n Muck (A10) (LRR B)
Black Histic (A				cky Mineral				luced Vertic (F18) I Parent Material (TF2)
Hydrogen Sulfi		• • •		yed Matrix	(F2)			
Stratified Layer		•)	Depleted N	natrix (F3) k Surface (	F6)		Othe	er (Explain in Remarks)
_ 1 cm Muck (A9 Depleted Below		- (Δ11)		ark Surface				
Depleted Below		(711)	The second secon	ressions (F			3Indicato	ors of hydrophytic vegetation and
Sandy Mucky			Vernal Poo		0)			nd hydrology must be present,
Sandy Gleyed				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				s disturbed or problematic.
Restrictive Layer								
Type:	0.01							
Depth (inches):							1.5-7-1.5	oil Present? Yes No X
Dopar (money).							Hydric Se	oli Present! Tes No.
Remarks: Hydr	ric soil	not pre	sent, so	ils di	Cam Pa	spidly	A CONTRACTOR	on Present? Tes No 73
	ric soil	not pre	sent, so	ils di	rain r	spidly	A CONTRACTOR	on Present? Tes No 7 x
YDROLOGY		not pre	sent, so	ils di	rain r	apidly	A CONTRACTOR	on Present? Tes No / X
YDROLOGY Vetland Hydrolog	y Indicators:				rain to	apidly	5	
YDROLOGY Vetland Hydrolog Primary Indicators (	y Indicators: (minimum of or		check all that app	ly)	can la	spidly	, Sec	condary Indicators (2 or more required)
YDROLOGY Vetland Hydrolog Primary Indicators ( Surface Water	y Indicators: (minimum of or (A1)		check all that app	ly) t (B11)	rain ra	spidly	, Sec	condary Indicators (2 or more required) Water Marks (B1) ( <b>Riverine</b> )
YDROLOGY Vetland Hydrolog Primary Indicators ( Surface Water High Water Tal	y Indicators: (minimum of or (A1) ble (A2)		check all that app Salt Crusi Biotic Cru	ly) t (B11) st (B12)		spidly	, Sec	condary Indicators (2 or more required) Water Marks (B1) ( <b>Riverine</b> ) Sediment Deposits (B2) ( <b>Riverine</b> )
YDROLOGY Vetland Hydrolog Primary Indicators ( Surface Water High Water Tal Saturation (A3)	y Indicators: (minimum of or (A1) ble (A2)	ne required; o	check all that app Salt Crust Biotic Cru Aquatic Ir	ly) t (B11) st (B12) vertebrates	s (B13)	spidly	Sec	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
YDROLOGY  Vetland Hydrolog  Primary Indicators (  Surface Water  High Water Tal  Saturation (A3)  Water Marks (E	y Indicators: (minimum of or (A1) ble (A2) ) 31) (Nonriveri	ne required; o	check all that app Salt Crust Biotic Cru Aquatic Ir Hydrogen	ly) (B11) st (B12) overtebrates Sulfide Od	s (B13) or (C1)		Sec X	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
YDROLOGY Vetland Hydrolog Primary Indicators ( Surface Water High Water Tal Saturation (A3)	y Indicators: (minimum of or (A1) ble (A2) ) 31) (Nonriveri	ne required; o	check all that app Salt Crusi Biotic Cru Aquatic Ir Hydrogen Oxidized	ly) t (B11) st (B12) overtebrates Sulfide Od Rhizospher	s (B13) lor (C1) es along L	_iving Roo	Sec	Condary 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)
YDROLOGY  Vetland Hydrolog  Primary Indicators (  Surface Water  High Water Tal  Saturation (A3)  Water Marks (E	y Indicators: (minimum of or (A1) ble (A2) ) 31) (Nonriveri osits (B2) (Non	ne required; o	check all that app Salt Crusi Biotic Cru Aquatic Ir Hydrogen Oxidized Presence	ly) t (B11) st (B12) evertebrates Sulfide Od Rhizospher of Reduced	s (B13) for (C1) res along L d Iron (C4)	Living Roo	Sec	water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
YDROLOGY  Vetland Hydrolog  Primary Indicators (  Surface Water  High Water Tal  Saturation (A3)  Water Marks (E  Sediment Depo	y Indicators: (minimum of on (A1) ble (A2) ) 31) (Nonriveri posits (B2) (Non	ne required; o	check all that app Salt Crusi Biotic Cru Aquatic Ir Hydrogen Oxidized Presence	ly) t (B11) st (B12) overtebrates Sulfide Od Rhizospher	s (B13) for (C1) res along L d Iron (C4)	Living Roo	Sec	condary 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 (C
YDROLOGY  Vetland Hydrolog  Primary Indicators (  Surface Water  High Water Tal  Saturation (A3)  Water Marks (B  Sediment Depo	y Indicators: (minimum of or (A1) ble (A2) ) 31) (Nonriveri osits (B2) (Non B3) (Nonriver	ne required; one) ne) nriverine) ine)	check all that app Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ird	ly) st (B11) st (B12) evertebrates Sulfide Od Rhizospher of Reduced on Reduction	s (B13) lor (C1) es along L d Iron (C4) on in Tilled	Living Roo	sec <u>x</u> ts (C3)	Condary 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 (C  Shallow Aquitard (D3)
YDROLOGY  Vetland Hydrolog  Primary Indicators (  Surface Water  High Water Tal  Saturation (A3)  Water Marks (E  Sediment Depo  Drift Deposits (  Surface Soil Cr	y Indicators: (minimum of or (A1) ble (A2) ) B1) (Nonriveriosits (B2) (Nonriveriosits (B6) ble on Aerial Ir	ne required; one) ne) nriverine) ine)	check all that app Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ird	ly) st (B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduced	s (B13) lor (C1) es along L d Iron (C4) on in Tilled	Living Roo	sec <u>x</u> ts (C3)	condary 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 (C
YDROLOGY  Vetland Hydrolog  Primary Indicators ( Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits ( Surface Soil Cr Inundation Visil	y Indicators: (minimum of or (A1) ble (A2) ) 31) (Nonriveri osits (B2) (Non B3) (Nonriver racks (B6) ble on Aerial In Leaves (B9)	ne required; one) ne) nriverine) ine)	check all that app Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ird	ly) st (B11) st (B12) evertebrates Sulfide Od Rhizospher of Reduced on Reduction	s (B13) lor (C1) es along L d Iron (C4) on in Tilled	Living Roo	sec <u>x</u> ts (C3)	Condary 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 (C  Shallow Aquitard (D3)
YDROLOGY  Vetland Hydrolog  Primary Indicators ( Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits ( Surface Soil Cr Inundation Visil Water-Stained	y Indicators: (minimum of or (A1) ble (A2) ) B1) (Nonriveriosits (B2) (Nonriveriosks (B6) ble on Aerial In Leaves (B9) s:	ne required; one) ne) nriverine) ine) magery (B7)	check all that app Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ird	ly) st (B11) st (B12) evertebrates Sulfide Od Rhizospher of Reducer on Reduction c Surface (C	s (B13) for (C1) res along L d Iron (C4) on in Tilled C7) marks)	Living Roo ) I Soils (C6	sec <u>x</u> ts (C3)	Condary 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 (C  Shallow Aquitard (D3)
YDROLOGY  Vetland Hydrolog  Primary Indicators ( Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits ( Surface Soil Cr Inundation Visit Water-Stained Surface Water Pres	y Indicators: (Minimum of or (A1) ble (A2) ) 31) (Nonriveri beits (B2) (Non B3) (Nonriver racks (B6) ble on Aerial In Leaves (B9) s: sent? Ye	ne required; one) nriverine) ine) magery (B7)	check all that app Salt Crus Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Irc Thin Mucl	ly) st (B11) st (B12) svertebrates Sulfide Od Rhizospher of Reduced on Reduction s Surface (C plain in Rer	s (B13) lor (C1) es along L d Iron (C4) on in Tilled C7) marks)	Living Roo ) I Soils (C6	sec <u>x</u> ts (C3)	Condary 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 (C  Shallow Aquitard (D3)
YDROLOGY  Vetland Hydrolog Primary Indicators ( Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits ( Surface Soil Cr Inundation Visil Water-Stained Vield Observations Surface Water Preservators	y Indicators: (minimum of or (A1) ble (A2) ) B1) (Nonriveriosits (B2) (Non B3) (Nonriverracks (B6) ble on Aerial In Leaves (B9) s: sent? Ye	ne required; of the req	check all that app Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ird Thin Mucl Other (Ex	ly) st (B11) st (B12) evertebrates Sulfide Od Rhizospher of Reduced on Reduction c Surface (Coplain in Rer	s (B13) lor (C1) les along L d Iron (C4) on in Tilled C7) marks)	Living Roo ) I Soils (C6	sec <u>X</u> — ts (C3) )	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 (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY  Vetland Hydrolog  Primary Indicators ( Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits ( Surface Soil Cr Inundation Visil Water-Stained Field Observations Furface Water Preservators Vater Table Preservaturation Present	y Indicators: (Minimum of or (A1) ble (A2) ) 31) (Nonriveri posits (B2) (Non (B3) (Nonriveri racks (B6) ble on Aerial In Leaves (B9) s: eent? Ye ringe)	ne required; one required; one) priverine) ine) magery (B7) es No es No es No	check all that app Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Mucl Other (Ex	ly) st (B11) st (B12) svertebrates Sulfide Od Rhizospher of Reduced on Reduction Surface (Coplain in Rer	s (B13) lor (C1) es along L d Iron (C4) on in Tilled C7) marks)	Living Roo ) I Soils (C6	ts (C3)	Condary 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 (C  Shallow Aquitard (D3)
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YDROLOGY  Vetland Hydrolog  Primary Indicators ( Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits ( Surface Soil Cr Inundation Visil Water-Stained Field Observations Furface Water Preservator Table Preservaturation Present College Capillary for the control of the co	y Indicators: (Minimum of or (A1) ble (A2) ) (B1) (Nonriverionsits (B2) (Nonriverionsits (B2) (Nonriverionsits (B6) ble on Aerial In Leaves (B9) s: sent? Yearinge) Data (stream	ne required; one required; one) priverine) ine) magery (B7) es No es No gauge, monit	check all that app Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Mucl Other (Ex  Depth (ir Depth (ir Coring well, aerial	ly) st (B11) st (B12) svertebrates Sulfide Od Rhizospher of Reduced on Reduction Surface (Contain in Rerection in Research in Res	s (B13) lor (C1) es along L d Iron (C4) on in Tilled C7) marks)	Living Roo ) I Soils (C6  Wetlate	ts (C3) hand Hydrolo	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 (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY  Vetland Hydrolog  Primary Indicators ( Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits ( Surface Soil Cr Inundation Visil Water-Stained Field Observations Furface Water Preservator Table Preservaturation Present College Capillary for the control of the co	y Indicators: (Minimum of or (A1) ble (A2) ) (B1) (Nonriverionsits (B2) (Nonriverionsits (B2) (Nonriverionsits (B6) ble on Aerial In Leaves (B9) s: sent? Yearinge) Data (stream	ne required; one required; one) priverine) ine) magery (B7) es No es No gauge, monit	check all that app Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Mucl Other (Ex  Depth (ir Depth (ir Coring well, aerial	ly) st (B11) st (B12) svertebrates Sulfide Od Rhizospher of Reduced on Reduction Surface (Contain in Rerection in Research in Res	s (B13) lor (C1) es along L d Iron (C4) on in Tilled C7) marks)	Living Roo ) I Soils (C6  Wetlate	ts (C3) hand Hydrolo	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 (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY  Vetland Hydrolog  Primary Indicators ( Surface Water High Water Tal Saturation (A3) Water Marks (E Sediment Depo Drift Deposits ( Surface Soil Cr Inundation Visil Water-Stained Field Observations Furface Water Preservator Table Preservaturation Present College Capillary for the control of the co	y Indicators: (Minimum of or (A1) ble (A2) ) (B1) (Nonriverionsits (B2) (Nonriverionsits (B2) (Nonriverionsits (B6) ble on Aerial In Leaves (B9) s: sent? Yearinge) Data (stream	ne required; one required; one) priverine) ine) magery (B7) es No es No gauge, monit	check all that app Salt Crust Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Mucl Other (Ex  Depth (ir Depth (ir Coring well, aerial	ly) st (B11) st (B12) svertebrates Sulfide Od Rhizospher of Reduced on Reduction Surface (Contain in Rerection in Research in Res	s (B13) lor (C1) es along L d Iron (C4) on in Tilled C7) marks)	Living Roo ) I Soils (C6  Wetlate	ts (C3) hand Hydrolo	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 (C Shallow Aquitard (D3) FAC-Neutral Test (D5)

Project/Site: Valley Can W		City/County: Sun	Duga Counts Sampling Date: 3/1/11			
Applicant/Owner:		State: CA Sampling Point: 1/6				
		Section, Township, Range:				
			, convex, none): Slope (%):			
			Long; Datum:			
Soil Map Unit Name: Steep Gullich Land / F	Fallbrook 5	sundy loans	NWI classification:			
Are climatic / hydrologic conditions on the site typical for		-				
			"Normal Circumstances" present? Yes X No			
Are Vegetation, Soil, or Hydrology						
			locations, transects, important features, etc			
Wetland Hydrology Present? Yes	No		nd? Yes No			
Remarks: Site wegetestion distributed due  VEGETATION – Use scientific names of pla		nce of pampas	grass			
	Absolute	Dominant Indicator	Dominance Test worksheet:			
Tree Stratum (Plot size:)	% Cover	Species? Status	Number of Dominant Species			
		yes FACW	That Are OBL, FACW, or FAC: (A)			
2. Washingtonia robust		-No FALW	Total Number of Dominant Species Across All Strata:  [B]			
4	35	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)			
Sapling/Shrub Stratum (Plot size:)	FR					
1. Typha Sp. 2. Tuncus acutus	50	11 -	Prevalence Index worksheet:			
3. Cor whate (pampas onuss)		· DB FAC	OBL species x 1 =			
4.			FACW species x 2 =			
5.			FAC species x 3 =			
	45	= Total Cover	FACU species x 4 =			
Herb Stratum (Plot size:)			UPL species x 5 =			
1			Column Totals: (A) (B)			
2,			Prevalence Index = B/A =			
4			Hydrophytic Vegetation Indicators:			
5			Dominance Test is >50%			
6			Prevalence Index is ≤3.0¹			
7			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
8			Problematic Hydrophytic Vegetation¹ (Explain)			
Woody Vine Stratum (Plot size:)		= Total Cover				
1			<sup>1</sup> Indicators of hydric soil and wetland hydrology must			
2.			be present, unless disturbed or problematic.			
		= Total Cover	Hydrophytic Vegetation Present? Yes No			
Remarks: 5		. (				
Jamph Located in Oak pipans	n wood	land in pond a	bout road crossing.			

	-	
-	-	
c.	$\overline{}$	
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Profile Description: (Desc	ribe to the dep	th needed to docum	ent the indicator	or confirm	the absence of	indicators.)
DepthMat	trix	Redox	Features			
(inches) Color (mois	st) %	Color (moist)	%Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-12 10 YR 3-	1.60					
Type: C=Concentration, D=	=Depletion, RM=	Reduced Matrix, CS	=Covered or Coate	d Sand Gra	ains. <sup>2</sup> Locatio	on: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Ap						Problematic Hydric Soils <sup>3</sup> :
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (L 1 cm Muck (A9) (LRR D Depleted Below Dark St Thick Dark Surface (A12 Sandy Mucky Mineral (S Sandy Gleyed Matrix (S	) urface (A11) 2) 31)	Loamy Gleye  Depleted Ma  Redox Dark	rix (S6) ry Mineral (F1) ed Matrix (F2) trix (F3) Surface (F6) rk Surface (F7) essions (F8)		2 cm Muc Reduced Red Parei Other (Exp  3Indicators of by wetland hyd	k (A9) (LRR C) k (A10) (LRR B) Vertic (F18) Int Material (TF2) Int plain in Remarks) Interpretation and Irology must be present, Irbed or problematic.
Restrictive Layer (if preser	and the second second					
Type:						
Depth (inches):					Hydric Soil Pre	esent? Yes X No
YDROLOGY						
Vetland Hydrology Indicat	ors:					
Primary Indicators (minimum		: check all that apply	)		Secondar	y Indicators (2 or more required)
Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonr Sediment Deposits (B2)  Drift Deposits (B3) (Non Surface Soil Cracks (B6 Inundation Visible on Ae Water-Stained Leaves (I	riverine) (Nonriverine) riverine) ) rial Imagery (B7	Salt Crust ( Biotic Crust ( Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S	B11)	)	Sedir Drift Drain s (C3) Dry-8 Crays Satur Shall	er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ow Aquitard (D3) Neutral Test (D5)
Field Observations:			.a 1, 11			
Surface Water Present? Water Table Present? Saturation Present?	Yes X N	No Depth (included)  Depth (included)  Depth (included)	nes):	_ _ Wetla	nd Hydrology Pı	resent? Yes X No

Ponding above roak crossing

(includes capillary fringe)

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

Remarks:

			Section	n Township Ra	ange:
	1				, convex, none): Concave Slope (%):
region (LRR):	1	Lat:			Long: Datum:
					NWI classification:
A STATE OF THE PROPERTY OF THE					(If no, explain in Remarks.)
Vegetation, Soil, or					"Normal Circumstances" present? Yes No
Vegetation, Soil, or	Hydrology	naturally pro	blemat	tic? (If n	eeded, explain any answers in Remarks.)
MMARY OF FINDINGS - A	Attach site m	nap showing	sam	pling point l	locations, transects, important features,
drophytic Vegetation Present?	Yes	No		Is the Sample	d Area
dric Soil Present?		_ No			nd? Yes No
etland Hydrology Present?	Yes	No		within a vvena	iid: TesNo
GETATION – Use scientific	names of r	plants			
JETATION - 03e 3cientino	, mannes or p	Absolute	Domir	nant Indicator	Dominance Test worksheet:
ee Stratum (Plot size:				es? Status	Number of Dominant Species
Quercus engalmann					That Are OBL, FACW, or FAC: (A
Quorcus agrildia					Total Number of Dominant
					Species Across All Strata: (B
oling/Shrub Stratum / Plat size:		85	= Tota	l Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A
Opt John (Plot size:	CHAVE &	5	de	5 UPL	Prevalence Index worksheet:
			0		Total % Cover of: Multiply by:
					OBL species x 1 =
					FACW species x 2 =
					FAC species x 3 =
l Otal Care (District		_5_	= Total	l Cover	FACU species x 4 =
Toxicodendon diver	Alaba a	E	11.6	1, 01	UPL species
TONICONEM STON ATTIE	SUM SUWX		8	<u> arc</u>	Column Totals:(A)(A)(D)
					Prevalence Index = B/A = 5.0
					Hydrophytic Vegetation Indicators:
					Dominance Test is >50%
					Prevalence Index is ≤3.0 <sup>1</sup>
					Morphological Adaptations <sup>1</sup> (Provide supporting
					data in Remarks or on a separate sheet)
		_5	= Total	l Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
ody Vine Stratum (Plot size:		2	1111	1.01	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Toxicodinden duas	Silbbar		yes	1110	be present, unless disturbed or problematic.
			- Total	I Cover	Hydrophytic
					Vegetation
Bare Ground in Herb Stratum	% C	over of Biotic Cr	ust		Present? Yes No X
marks: Day Cibacio	14.0				

	-60	4		
•	-		1	
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Sampling Point: 17

Profile Description: (Describe to the depth needs  Depth Matrix	Redox Features	alouter or commit		111111111111111111111111111111111111111
	r (moist) %	Type <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0-6 10/123/3				
6-12 SYE 3/3				
010 31020				
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced			ains. Location	on: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, u		d.)		Problematic Hydric Soils <sup>3</sup> :
	Sandy Redox (S5)			k (A9) (LRR C)
	Stripped Matrix (S6)	(=4)		k (A10) (LRR B)
	Loamy Mucky Mineral (			Vertic (F18)
	Loamy Gleyed Matrix (I	F2)		nt Material (TF2)
	Depleted Matrix (F3)	0)	Other (Ex	plain in Remarks)
	Redox Dark Surface (F			
	Depleted Dark Surface		3Indicators of h	nydrophytic vegetation and
	Redox Depressions (F8	5)		rology must be present,
	Vernal Pools (F9)			rbed or problematic.
Sandy Gleyed Matrix (S4)  Restrictive Layer (if present):			uniess distu	Thed of problematic.
Type:			11 11 0 11 D	No V
Depth (inches):  Remarks: No hydric Soil inclinations o	bsaved,		Hydric Soil Pre	esent? Yes No <u>X</u>
Depth (inches):  Remarks: X10 hydric Soil india Jors o	bservet.		Hydric Soil Pre	esent? Yes No X
Depth (inches):  Remarks: No hydric Soil inclinators o	bsavet,		Hydric Soil Pre	esent? Yes No <u>X</u>
Depth (inches):  Remarks: No hydric Soil inclinators of the state of the st				
Depth (inches):  Remarks: No hydric Soil inclinations of the Soi	all that apply)		Secondar	ry Indicators (2 or more required)
Depth (inches):  Remarks: No hydric Soil inclinations of the state of the st	all that apply) Salt Crust (B11)		Secondar Wate	ry Indicators (2 or more required) er Marks (B1) (Riverine)
Depth (inches):  Remarks: No hydric Soil inclinations of the property o	all that apply)		Secondar Wate	ry Indicators (2 or more required)
Depth (inches):	all that apply) Salt Crust (B11)	(B13)	Secondar Wate Sedir	ry Indicators (2 or more required) er Marks (B1) (Riverine)
Depth (inches):	all that apply) Salt Crust (B11) Biotic Crust (B12)		Secondar  Wate Sedir Drift	ry Indicators (2 or more required) er Marks (B1) ( <b>Riverine</b> ) ment Deposits (B2) ( <b>Riverine</b> )
Depth (inches):	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo	r (C1)	Secondar  Wate Sedir  Drift Drain	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine)
Depth (inches):	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo	r (C1) s along Living Roo	Secondar  Wate Sedir Drift Drair	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10)
Depth (inches):	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere	or (C1) s along Living Roo Iron (C4)	Secondar  Wate Sedir  Drift Drair  ts (C3) Cray	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2)
Depth (inches):	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6	Secondar	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Pepth (inches):	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7)	Secondar Wate Sedir Drift Drain ts (C3) Dry-S Cray( ) Satur Shall	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ow Aquitard (D3)
Primary Indicators (minimum of one required; check a 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)	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7)	Secondar Wate Sedir Drift Drain ts (C3) Dry-S Cray( ) Satur Shall	ry Indicators (2 or more required) r Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
Pepth (inches):  Remarks: No hydric Sort uncline for so the discrete for sort uncline for so the discrete for sort uncline fo	all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates  Hydrogen Sulfide Odo  Oxidized Rhizosphere  Presence of Reduced  Recent Iron Reductior  Thin Muck Surface (Coother (Explain in Rem	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7)	Secondar Wate Sedir Drift Drain ts (C3) Dry-S Cray( ) Satur Shall	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ow Aquitard (D3)
Primary Indicators (minimum of one required; check as 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) Field Observations: Surface Water Present?  Yes NoX	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C' Other (Explain in Rem	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7) arks)	Secondar Wate Sedir Drift Drain ts (C3) Dry-S Cray( ) Satur Shall	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ow Aquitard (D3)
Prince Water (A1)  High Water Table (A2)  Sediment Deposits (B2) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water Water Water (A9)  Surface Water (B9)  Water Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes No	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C' Other (Explain in Rem	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7) arks)	Secondar  Wate Sedir Drift Drain ts (C3) Dry-S Cray( ) Satur Shall FAC-	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Pepth (inches):  Remarks: No hydric Sort uncline Sort of Sort and Sort of Sort	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C' Other (Explain in Rem	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7) arks)	Secondar  Wate Sedir Drift Drain ts (C3) Dry-S Cray( ) Satur Shall FAC-	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ow Aquitard (D3)
Depth (inches):	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C' Other (Explain in Rem Depth (inches): Depth (inches):	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7) arks)  Wetla	Secondar  Wate Sedir Drift Drain ts (C3) Dry-S Cray Satur Shall FAC-	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Primary Indicators (minimum of one required; check as 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 Table Present? Water Table Present?  Water Table Present?  Yes No Saturation Present?  No Saturation Present?  No Saturation Present?  Yes No Saturation Present?	all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates  Hydrogen Sulfide Odo  Oxidized Rhizosphere  Presence of Reduced  Recent Iron Reductior  Thin Muck Surface (C'  Other (Explain in Rem  Depth (inches):  Depth (inches):  Depth (inches):	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7) arks)  Wetla	Secondar  Wate Sedir Drift Drain ts (C3) Dry-S Crayl Satur Shall FAC-	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Depth (inches):	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C' Other (Explain in Rem Depth (inches): Depth (inches):	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7) arks)  Wetla	Secondar  Wate Sedir Drift Drain ts (C3) Dry-S Crayl Satur Shall FAC-	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Depth (inches):	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C' Other (Explain in Rem Depth (inches): Depth (inches):	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7) arks)  Wetla	Secondar  Wate Sedir Drift Drain ts (C3) Dry-S Crayl Satur Shall FAC-	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Primary Indicators (minimum of one required; check as 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 Table Present? Water Table Present?  Water Table Present?  Yes No Saturation Present?  No Saturation Present?  No Saturation Present?  Yes No Saturation Present?	all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates Hydrogen Sulfide Odo Oxidized Rhizosphere Presence of Reduced Recent Iron Reductior Thin Muck Surface (C' Other (Explain in Rem Depth (inches): Depth (inches):	or (C1) s along Living Roo Iron (C4) n in Tilled Soils (C6 7) arks)  Wetla	Secondar  Wate Sedir Drift Drain ts (C3) Dry-S Crayl Satur Shall FAC-	ry Indicators (2 or more required) er Marks (B1) (Riverine) ment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)

Project/Site: Valley Centre Applicant/Owner:		City/Co	ounty: Sam I	State: CA Sampling Date: 3/3/
Investigator(s): AIB, GAS, EJM		Section	Township R	lange:
Landform (hillslope, terrace, etc.): Gully				
				Long: Datum:
Soil Map Unit Name: Steen bullied land / Cu				
re climatic / hydrologic conditions on the site typical for the				
re Vegetation, Soil, or Hydrology				
re Vegetation, Soil, or Hydrology	naturally pro	oblemati	ic? Po (If n	needed, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site map	showing	samp	oling point	locations, transects, important features,
Hydrophytic Vegetation Present? Yes N Hydric Soil Present? Yes N Wetland Hydrology Present? Yes N Remarks:	10 X		s the Sampleo	. /
EGETATION – Use scientific names of plan	ato.			
EGETATION - Ose scientific frames of plan	Absolute	Domin	ant Indicator	Dominance Test worksheet:
ree Stratum (Plot size:)			es? Status	Number of Dominant Species
				That Are OBL, FACW, or FAC:
				Total Number of Dominant Species Across All Strata:  [Example 1]
·		= Total	Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:) . Mal /NU (Malos Ma laurina)	40	405	UPL	Prevalence Index worksheet:
· Bac Pil (Bachais pilularis)	40	ges	UPL	Total % Cover of: Multiply by:
		0		OBL species x 1 =
				FACW species x 2 =
				FAC species x 3 =
L Desires Library	_80	= Total	Cover	FACU species x 4 =
erb Stratum (Plot size:)	20	1100	1101	UPL species 100 x 5 = 500
far fyc (Carduus pycnocepholus)	40	Jes	O(FZ	Column Totals: 100 (A) 500
				Prevalence Index = B/A = 5.0
				Hydrophytic Vegetation Indicators:
				Dominance Test is >50%
				Prevalence Index is ≤3.0 <sup>1</sup>
				Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
	20	= Total	Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
oody Vine Stratum (Plot size:)				<sup>1</sup> Indicators of hydric soil and wetland hydrology mus
				be present, unless disturbed or problematic.
	155	- T-1-1		Hydrophytic
Bare Ground in Herb Stratum % Cover	of Biotic Cru			Vegetation Present?  Yes No
emarks:				. /
				W.J.
				1.5

	10
Sampling Point: _	10

SOIL

Depth Matrix	Redox	nent the indicator of Features			
(inches) Color (moist) %	Color (moist)	%Type¹	Loc <sup>2</sup>	Texture	Remarks
0-4 7.54R4-4 100	2	·	فسنخ	Sand	
4-7 7.54R3-3 100			حست	Sandy logi	
7-8 7.54R4-4 100	<u> </u>			Sand	saturated
8-16 7.54R3-2 100				loam	saturated
<sup>1</sup> Type: C=Concentration, D=Depletion, F Hydric Soil Indicators: (Applicable to  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)	all LRRs, unless otherw Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Mat	wise noted.)  x (S5)  rix (S6)  y Mineral (F1)  ed Matrix (F2)  trix (F3)	d Sand Gr	Indicators 1 cm N 2 cm N Reduce Red Pa	cation: PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> :  Muck (A9) (LRR C)  Muck (A10) (LRR B)  ed Vertic (F18)  arent Material (TF2)  Explain in Remarks)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Redox Depre	essions (F8)		wetland I	of hydrophytic vegetation and hydrology must be present, sturbed or problematic.
Restrictive Layer (if present):					
Type:					V
Depth (inches):				Hydric Soil	Present? Yes No X
YDROLOGY					
YDROLOGY Wetland Hydrology Indicators:	red; check all that apply)	(pr			dary Indicators (2 or more required)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 (Water-Stained Leaves (B9)	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Thin Muck S	B11) (B12) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C4)		W Se Dr Dr s (C3) Dr Cr Se Sh	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required one supplied of the primary Indicators)  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 (Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes  Saturation Present?	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	(B11) (B12) (B12) (Intebrates (B13) (Intebrates (B13) (Intebrates (B13) (Intebrates (B13) (Interpretation (C1) (Interpretation (C4) (In	Soils (C6)	W Dr Dr s (C3) Dr Cr Sa Sh FA	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) raallow Aquitard (D3)
X Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery ( Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Yes X	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	(B11) (B12) (B12) (Intebrates (B13) (Intebrates (B13) (Intebrates (B13) (Intebrates (B13) (Interpretation (C1) (Interpretation (C4) (In	Soils (C6)	W Dr Dr s (C3) Dr Cr Sa Sh FA	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) rallow Aquitard (D3) AC-Neutral Test (D5)

Project/Site: Las tilles		City/County	: San	Dago Comby Sampling Date: 3/3/10
Applicant/Owner: Accrefue				State: CA Sampling Point: 19
Investigator(s): 6. Scheed		Section, To	wnship, R	ange:
Landform (hillslope, terrace, etc.):		Local relie	f (concave,	, convex, none): <u>Cyrcave</u> Slope (%): <u>Z-5</u>
				Long: Datum:
Soil Map Unit Name: 5 texp bulled land	Ciencha i	ocital sh	nely Loa	m NWI classification:
Are climatic / hydrologic conditions on the site typical				
			U.	"Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology	naturally pro	oblematic?	No (If n	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing	samplin	g point	locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No	Is th	e Sample	d Area
	No			nd? Yes No
Wetland Hydrology Present? Yes				
Remarks: & Vegetation cleaned for	fuel or ago	nealt	unal	purposes.
Probably covered w/l				
VEGETATION – Use scientific names of		٥		
	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: (B)
4.				
		_ = Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)  1. Malosma Lawina	7	11.02	1.01	Prevalence Index worksheet:
2. Julie Messifera	3	130	481	Total % Cover of:Multiply by:
3.		-0		OBL species x 1 =
4				FACW species x 2 =
5				FAC species x 3 =
Herb Stratum (Plot size:)	_10_	= Total Co	ver	FACU species x 4 =
1. Branus dianabres	30	465	UPL	UPL species $100$ x 5 = $500$ Column Totals: $100$ (A) $500$ (B)
	30	yes	UPL	
3. Brown marke Inerin	30	485	UPL	Prevalence Index = B/A =5, U
4				Hydrophytic Vegetation Indicators:
5		-		Dominance Test is >50%
6				Prevalence Index is ≤3.0¹
7	<del></del>			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	80	= Total Co		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:)		_ Total Go	VCI	
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2,		127		
~	1	= Total Co		Hydrophytic Vegetation
% Bare Ground in Herb Stratum %	Cover of Biotic Ci	rust		Present? Yes No
Remarks: Ephemeral chamage con	1500 1	06 1	2.610	*
Charter Comments Con	as a H	1 wind	ana,	

US Army Corps of Engineers

Arid West - Version 2.0

Depth Matrix	Redox Features	Log <sup>2</sup> Totaling	Domarka
inches) Color (moist) %	Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture	Remarks
-12 10/83/3 1006		Emply lettere _	
		<i>J</i>	
		سنة استست يسب	
Type: C-Concentration D-Depletion PM	=Reduced Matrix, CS=Covered or Coated	Sand Grains <sup>2</sup> I ocation:	PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all			oblematic Hydric Soils <sup>3</sup> :
		1 cm Muck (A	
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A	
_ Histic Epipedon (A2)	Stripped Matrix (S6)	Reduced Ver	
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced ver	1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y 1 Y
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		
_ Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Explai	n in Remarks)
_ 1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
_ Depleted Below Dark Surface (A11)	<ul><li>Depleted Dark Surface (F7)</li><li>Redox Depressions (F8)</li></ul>	3Indicators of Ld	ophytic vegetation and
_ Thick Dark Surface (A12)			ogy must be present,
_ Sandy Mucky Mineral (S1)	Vernal Pools (F9)	The state of the s	d or problematic.
_ Sandy Gleyed Matrix (S4)		uniess disturbe	d or problematic.
estrictive Layer (if present):			
Type:	<del></del>	the second second	- L
Depth (inches):emarks: Who hydric ndica for		Hydric Soil Prese	nt? Yes No
VDBOLOCV			
etland Hydrology Indicators:		· ·	
etland Hydrology Indicators:			ndicators (2 or more required)
Tetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1)	Salt Crust (B11)	Water N	arks (B1) (Riverine)
etland Hydrology Indicators: rimary Indicators (minimum of one required		Water N	
Tetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1)	Salt Crust (B11)	Water M Sedimen	arks (B1) (Riverine)
Tetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust (B11) Biotic Crust (B12)	Water M Sedimer Drift Dep	arks (B1) (Riverine) nt Deposits (B2) (Riverine)
Tetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	<ul><li>Salt Crust (B11)</li><li>Biotic Crust (B12)</li><li>Aquatic Invertebrates (B13)</li></ul>	Water M Sedimer Drift Dep Drainag	arks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Liv</li> </ul>	Water M Sedimer Drift Dep Drainagering Roots (C3) Dry-Sea	arks (B1) (Riverine) at Deposits (B2) (Riverine) aosits (B3) (Riverine) e Patterns (B10) son Water Table (C2)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Liv</li> <li>Presence of Reduced Iron (C4)</li> </ul>	Water M Sedimer Drift Dep Drainag ing Roots (C3) Crayfish	arks (B1) (Riverine) In Deposits (B2) (Riverine) In Deposits (B3) (Riverine) In Patterns (B10) In Patterns (B10) In Patterns (B10) In Patterns (C2) In Burrows (C8)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required 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)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Liv</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled St</li> </ul>	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Crayfish Soils (C6) Saturation	arks (B1) (Riverine) In Deposits (B2) (Riverine) In Deposits (B3) (Riverine) In Patterns (B10) In Patterns (B10) In Patterns (C8) In Visible on Aerial Imagery (C9)
Tetland Hydrology Indicators: rimary Indicators (minimum of one required 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 (B3)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7)	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Crayfish Soils (C6) Shallow	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required 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 (B3) Water-Stained Leaves (B9)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Liv</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled St</li> </ul>	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Crayfish Soils (C6) Shallow	arks (B1) (Riverine) In Deposits (B2) (Riverine) In Deposits (B3) (Riverine) In Patterns (B10) In Patterns (B10) In Patterns (C8) In Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required 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 (B3) Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Crayfish Soils (C6) Shallow	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3)
rimary Indicators (minimum of one required 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 (B3) Water-Stained Leaves (B9) ield Observations:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Crayfish Soils (C6) Shallow	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3)
rimary Indicators (minimum of one required 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 (B3) Water-Stained Leaves (B9) Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Crayfish Soils (C6) Shallow	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
rimary Indicators (minimum of one required 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 (B3)  Water-Stained Leaves (B9)  ield Observations:  urface Water Present?  //ater Table Present?  Yes Indicators (Persent)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Crayfish Soils (C6) Shallow	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
Vetland Hydrology Indicators:  rimary Indicators (minimum of one required  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 (B3)  Water-Stained Leaves (B9)  ield Observations:  urface Water Present?  VesI  aturation Present? YesI  ncludes capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): Depth (inches):	Water M Sedimer Sedimer Drift Dep Drainag ing Roots (C3) Crayfish Soils (C6) Saturati Shallow FAC-Ne  Wetland Hydrology Pres	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
Vetland Hydrology Indicators:  rimary Indicators (minimum of one required  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 (B3)  Water-Stained Leaves (B9)  ield Observations:  urface Water Present?  VesI  aturation Present? YesI  ncludes capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): Depth (inches):	Water M Sedimer Sedimer Drift Dep Drainag ing Roots (C3) Crayfish Soils (C6) Saturati Shallow FAC-Ne  Wetland Hydrology Pres	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9 Aquitard (D3) utral Test (D5)
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 (B2) Water-Stained Leaves (B9) ield Observations: urface Water Present? Vater Table Present? Vater Table Present? VesI Includes capillary fringe) Vescribe Recorded Data (stream gauge, model)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): Depth (inches): onitoring well, aerial photos, previous inspections.	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Dry-Sea Crayfish Soils (C6) Saturati Shallow FAC-Ne Wetland Hydrology Pres	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) atral Test (D5)
Vetland Hydrology Indicators:  Irimary Indicators (minimum of one required 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 (B3) Water-Stained Leaves (B9) ield Observations: urface Water Present? VesI vater Table Present? YesI aturation Present? YesI ncludes capillary fringe) escribe Recorded Data (stream gauge, mo	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): Depth (inches): onitoring well, aerial photos, previous inspections.	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Dry-Sea Crayfish Soils (C6) Saturati Shallow FAC-Ne Wetland Hydrology Pres	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) atral Test (D5)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required 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 (B3) Water-Stained Leaves (B9) Vetla Observations: Vetlater Table Present? VesIndicated Capillary fringe) Vescribe Recorded Data (stream gauge, moderated Capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): Depth (inches): onitoring well, aerial photos, previous inspections.	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Dry-Sea Crayfish Soils (C6) Saturati Shallow FAC-Ne Wetland Hydrology Pres	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9 Aquitard (D3) atral Test (D5)
Tetland Hydrology Indicators:  Timary Indicators (minimum of one required 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 (B3)  Water-Stained Leaves (B9)  eld Observations:  urface Water Present?  Saturation Present?  Yes Indicated Capillary fringe)  escribe Recorded Data (stream gauge, moderness)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): Depth (inches): onitoring well, aerial photos, previous inspections.	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Dry-Sea Crayfish Soils (C6) Saturati Shallow FAC-Ne Wetland Hydrology Pres	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9 Aquitard (D3) atral Test (D5)
Vetland Hydrology Indicators: rimary Indicators (minimum of one required 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 (B3) Water-Stained Leaves (B9) Vetlad Observations: Urface Water Present? VesI Vater Table Present? YesI Vater Table Present? YesI Vetladdes capillary fringe) Vescribe Recorded Data (stream gauge, moderated)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): Depth (inches):	Water M Sedimer Drift Dep Drainag Sing Roots (C3) Dry-Sea Crayfish Soils (C6) Saturati Shallow FAC-Ne Wetland Hydrology Pres	arks (B1) (Riverine) at Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) atral Test (D5)

Project/Site: Vally Centr		City/Cou	nty: Sam	Digo Comby	Sampling	Date: 3/3/
Applicant/Owner:				State: C	A Sampling	Point: 20
Investigator(s): AIB, GAS, ETM		Section,	Township, F	Range:		40
Landform (hillslope, terrace, etc.): Flat		Local re	lief (concave	, convex, none): <u>C</u>	mane	Slope (%): 0
Subregion (LRR): LPR -C	Lat:			Long:		_ Datum:
Soil Map Unit Name:				NWI d		
Are climatic / hydrologic conditions on the site typical for th	is time of ve	ear? Yes				
Are Vegetation, Soil, or Hydrology						Yes X No
Are Vegetation, Soil, or Hydrology						
SUMMARY OF FINDINGS – Attach site map						
			mg perm		,	
	No	1	the Sample	d Area	V	
	Vo	w	ithin a Wetla	ind? Yes	K_ No_	
	Y-12	1 0	1 / - /	1. 1 -1 -1	*	
Remarks: Vige faction dustur bed due to	agnicula	tural,	/orchand	3 Knd culd	ming	
/EGETATION – Use scientific names of plan	its.					
7 01-1-1-1	Absolute		nt Indicator	Dominance Test	worksheet:	
Tree Stratum (Plot size:)  1. Populus Gremontii		No	? Status	Number of Domir		4. (A)
2. Eucalyptus Sp.		110	UPL	That Are OBL, FA	CVV, OI FAC.	(A)
3. Salix heviagata	10	ixs	FACE	Total Number of I Species Across A		5 (B)
4. Lashingtonia robusta	2	No	FACE	Species Across A	iii Strata: _	) (B)
	16	= Total C		Percent of Domin		80 (A/E
Sapling/Shrub Stratum (Plot size:)				mat Are Obt., FA	CVV, OI FAC	(A/E
1. Buc Sal (Bucharis Salici Glia)	5	yes.	FORW	Prevalence Inde		
2. tam can Hamarise rammosissime	) >	905	FACE		er of:	
3				OBL species _		
4	·			FACW species _		
5		7213035		FAC species _		
Herb Stratum (Plot size:)	10	= Total C	over	FACU species _ UPL species		
				Column Totals:		(B)
Pic ech (Picris echipodes)	15	405	FAC	Coldifin Totals.	(^/	(D)
B. Casex So. (unlarella selse)	5	No	FALL	Prevalence	Index = B/A =	
· Cold julo (Cortaduria jubata)		No	UPL	Hydrophytic Veg	etation Indicator	rs:
(Carpobrous Edulis)	20	yes	UPL	Dominance T	est is >50%	
		-		Prevalence Ir		
· <u>,                                    </u>				Morphologica	l Adaptations <sup>1</sup> (Pi marks or on a se	rovide supporting
				Problematic H		The second secon
	41	= Total C	over	Floblematic F	Tydrophytic vege	lation (Explain)
Voody Vine Stratum (Plot size:)	*			<sup>1</sup> Indicators of hydr	ic soil and wetlan	d hydrology must
				be present, unless		
·	*	_ T-4-1 O		Hydrophytic		
		= Total C		Vegetation		
% Bare Ground in Herb Stratum % Cover	of Biotic Cr	ust		Present?	Yes	No
Remarks:						

Sampling Point: Zo

	Matrix	Redo	ox Features	1 002	Towner	Remarks
(inches) Color (m 0-12 104R3	The second secon		%Type <sup>1</sup> _		Sandy lang	Remarks
0-14 10/15						
Type: C=Concentration, ydric Soil Indicators: (	D=Depletion, RM=I Applicable to all L	Reduced Matrix, CS RRs, unless other	S=Covered or Coate	d Sand Gr	Indicators for P	: PL=Pore Lining, M=Matrix. roblematic Hydric Soils³:
Histosol (A1)		Sandy Redo			1 cm Muck ( 2 cm Muck (	
<ul><li>Histic Epipedon (A2)</li><li>Black Histic (A3)</li></ul>		Stripped Ma Loamy Muc			Reduced Ve	
Hydrogen Sulfide (A4) Stratified Layers (A5) 1 cm Muck (A9) (LRR	(LRR C)	Loamy Gley Depleted Ma Redox Dark	ved Matrix (F2) atrix (F3) : Surface (F6)		Red Parent I	Material (TF2) iin in Remarks)
Depleted Below Dark Thick Dark Surface (A Sandy Mucky Mineral Sandy Gleyed Matrix (	(S1)		ark Surface (F7) ressions (F8) s (F9)		wetland hydrol	drophytic vegetation and logy must be present, ed or problematic.
Restrictive Layer (if pres						
Type:						~
Depth (inches):	may have	been dist	turbed in	this		ent? Yes X No No (coal in stallation)
Depth (inches):	may have	been dist	rurbed in	this		
Depth (inches):	,	been dist	whed in	this		
Depth (inches):	ators:			this	drainage.	C(cab installation)
Depth (inches):Remarks:	ators:	check all that apply	r) (B11)	this	Secondary I	ndicators (2 or more required)
Depth (inches):  Remarks: Soll 3 v  YDROLOGY  Vetland Hydrology Indications (minimus)  Surface Water (A1)  High Water Table (A2)	ators: im of one required;	check all that apply Salt Crust ( Biotic Crust	r)  B11)  t (B12)	this	Secondary I  Water M  Sedime	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine)
Popth (inches):  Control of the cont	ators: Im of one required;	check all that apply Salt Crust ( Biotic Crust Aquatic Inv	r) (B11) t (B12) ertebrates (B13)	this	Secondary I  Water M  Sedime  Drift De	ndicators (2 or more required)  Marks (B1) (Riverine)  nt Deposits (B2) (Riverine)  posits (B3) (Riverine)
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Popth (inches):    Commarks:	ators: um of one required; unriverine) 2) (Nonriverine)	check all that apply  Salt Crust ( Biotic Crust Aquatic Inv Hydrogen S	() (B11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L	iving Root	Secondary I  Sedime Drift De Drainag s (C3) Dry-Sea	ndicators (2 or more required)  Marks (B1) (Riverine)  nt Deposits (B2) (Riverine)  posits (B3) (Riverine)  pe Patterns (B10)  ason Water Table (C2)
Popth (inches):  Popth	afors: um of one required; unriverine) 2) (Nonriverine) onriverine)	check all that apply  Salt Crust ( Biotic Crust Aquatic Inv Hydrogen S Oxidized RI	() (B11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L of Reduced Iron (C4)	iving Root	Secondary I  Water M Sedime Drift De Drainag s (C3) Dry-Sea	ndicators (2 or more required)  Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) te Patterns (B10)
Depth (inches):  Depth (inches):  Demarks: Soll 3 P  Demarks: Soll 3 P  Demarks: Soll 4 P  Demarks: Soll 4 P  Demarks: Soll 6 P	afors: um of one required; unriverine) (Nonriverine) onriverine)	check all that apply Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S Oxidized Ri Presence o	() (B11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L of Reduced Iron (C4) n Reduction in Tilled	iving Root	Secondary I  Water M Sedime Drift De Drainag s (C3) Dry-Sea Crayfish Saturati	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) the Patterns (B10) ason Water Table (C2) the Burrows (C8)
Depth (inches):  Cemarks: Soll 3 v  Control 2 v  Control 3 v  Control 2 v  Control 3 v  Control 3 v  Control 4 v  Control	ators: um of one required; unriverine) 2) (Nonriverine) ponriverine) 36) Aerial Imagery (B7)	check all that apply  Salt Crust ( Biotic Crust Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror	() (B11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L of Reduced Iron (C4)	iving Root	Secondary I  Water M Sedime Drift De Drainag S (C3) Crayfish Saturati Shallow	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) te Patterns (B10) ason Water Table (C2) the Burrows (C8) on Visible on Aerial Imagery (C9)
Popth (inches):    Continue   Con	ators: um of one required; unriverine) 2) (Nonriverine) ponriverine) 36) Aerial Imagery (B7)	check all that apply  Salt Crust ( Biotic Crust Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror	() (B11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L of Reduced Iron (C4) in Reduction in Tilled Surface (C7)	iving Root	Secondary I  Water M Sedime Drift De Drainag S (C3) Crayfish Saturati Shallow	ndicators (2 or more required)  Marks (B1) (Riverine)  Int Deposits (B2) (Riverine)  posits (B3) (Riverine)  e Patterns (B10)  ason Water Table (C2)  Burrows (C8)  on Visible on Aerial Imagery (C9)  Aquitard (D3)
Popth (inches):    Commarks:	ators: um of one required; unriverine) 2) (Nonriverine) porriverine) 66) Aerial Imagery (B7) (B9)	check all that apply  Salt Crust ( Biotic Crust Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror	(B11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L of Reduced Iron (C4) n Reduction in Tilled Surface (C7) lain in Remarks)	iving Root	Secondary I  Water M Sedime Drift De Drainag S (C3) Crayfish Saturati Shallow	ndicators (2 or more required)  Marks (B1) (Riverine) Int Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) ason Water Table (C2) in Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3)
Popth (inches):    Continued   Continued	afors: Im of one required; Inriverine) (Nonriverine) (S6) Aerial Imagery (B7) (B9)  Yes X No	check all that apply Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror Thin Muck S Other (Expl	EB11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L of Reduced Iron (C4) in Reduction in Tilled Surface (C7) lain in Remarks) hes):	iving Root Soils (C6)	Secondary I  Water M Sedime Drift De Drainag S (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 Aquitard (D3) eutral Test (D5)
Popth (inches):  Proposition of the present?	afors: Im of one required; Inriverine) (Nonriverine) (S6) Aerial Imagery (B7) (B9)  Yes X No	check all that apply  Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror Thin Muck S Other (Expl	EB11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L of Reduced Iron (C4) in Reduction in Tilled Surface (C7) lain in Remarks) hes):	iving Root Soils (C6)	Secondary I  Water M Sedime Drift De Drainag S (C3) Crayfish Saturati Shallow	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 Aquitard (D3) eutral Test (D5)
Depth (inches):  Remarks: Soll 3 V  POROLOGY  Vetland Hydrology Indication (Minimu)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (None Sediment Deposits (B2)  Drift Deposits (B3) (None Surface Soil Cracks (B1)  Inundation Visible on A Water-Stained Leaves (B1)  Water Table Present?  Vater Table Present?  Acturation Present?	ators: Im of one required; Inriverine) 2) (Nonriverine) Inriverine) 36) Aerial Imagery (B7) (B9)  Yes X No Yes X No Yes X No Yes X No	check all that apply Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror Thin Muck S Other (Expl	() (B11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L of Reduced Iron (C4) n Reduction in Tilled Surface (C7) lain in Remarks) hes):  hes):  O hotos, previous insp	iving Root Soils (C6)  Wetlar ections), if	Secondary I  Water M Sedime Drift De Drainag S (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 Aquitard (D3) autral Test (D5)
Depth (inches):  Remarks: Soll 3 V  POROLOGY  Vetland Hydrology Indication (Minimu)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (None Sediment Deposits (B2)  Drift Deposits (B3) (None Surface Soil Cracks (B1)  Inundation Visible on A Water-Stained Leaves (B1)  Water Table Present?  Vater Table Present?  Acturation Present?	ators: Im of one required; Inriverine) 2) (Nonriverine) Inriverine) 36) Aerial Imagery (B7) (B9)  Yes X No Yes X No Yes X No Yes X No	check all that apply Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror Thin Muck S Other (Expl	() (B11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L of Reduced Iron (C4) n Reduction in Tilled Surface (C7) lain in Remarks) hes):  hes):  O hotos, previous insp	iving Root Soils (C6)  Wetlar ections), if	Secondary I  Water M Sedime Drift De Drainag S (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 Aquitard (D3) autral Test (D5)
Depth (inches):  Remarks: Soll 3 V  POROLOGY  Vetland Hydrology Indication (Minimu)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (None Sediment Deposits (B2)  Drift Deposits (B3) (None Surface Soil Cracks (B1)  Inundation Visible on A Water-Stained Leaves (B1)  Water Table Present?  Vater Table Present?  Acturation Present?	ators: Im of one required; Inriverine) 2) (Nonriverine) Inriverine) 36) Aerial Imagery (B7) (B9)  Yes X No Yes X No Yes X No Yes X No	check all that apply Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S Oxidized RI Presence o Recent Iror Thin Muck S Other (Expl	() (B11) t (B12) ertebrates (B13) Sulfide Odor (C1) hizospheres along L of Reduced Iron (C4) n Reduction in Tilled Surface (C7) lain in Remarks) hes):  hes):  O hotos, previous insp	iving Root Soils (C6)  Wetlar ections), if	Secondary I  Water M Sedime Drift De Drainag S (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) Marks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) ne Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9 Aquitard (D3) eutral Test (D5)

Project/Site: <u>Valley Center</u>					
Applicant/Owner:					Sampling Point: 210
nvestigator(s): A 13 GAS	, ESM		Section, Township, R	lange:	
andform (hillslope, terrace, etc.):	errace		Local relief (concave	, convex, none): _ Cm C	Slope (%): <u>O</u>
ubregion (LRR): LRQ -C		Lat:		Long:	Datum:
oil Map Unit Name:				NWI classifi	
re climatic / hydrologic conditions on		or this time of ve	4		
			F. A C. C		present? Yes X No
e Vegetation, Soil, or					
re Vegetation, Soil, or	Hydrology	naturally pro	oblematic? (If n	needed, explain any answe	ers in Remarks.)
UMMARY OF FINDINGS - A	Attach site m	ap showing	sampling point	locations, transects	s, important features, e
Hydrophytic Vegetation Present?	Yes	No	Is the Sample	d Area	
Hydric Soil Present?	Yes	No	within a Wetla		No
Vetland Hydrology Present?	Yes	No	William a Would		
temarks:					
EGETATION – Use scientific	names of p		Dominant Indicator	Dominance Test work	sheet:
ree Stratum (Plot size;	)	% Cover	Species? Status	Number of Dominant Si	
Washington's robust	19			That Are OBL, FACW,	
				Total Number of Domin	ant
				Species Across All Stra	
				Percent of Dominant Sp	peries
			= Total Cover	That Are OBL, FACW, of	
apling/Shrub Stratum (Plot size:	)	-1		Prevalence Index work	(chaot)
				The state of the s	Multiply by:
Arundo donax					x 1 =
					x 2 =
				The state of the s	x 3 =
			= Total Cover		x 4 =
erb Stratum (Plot size:	)	-	- Total Gover	UPL species	
Epiloblum ciliatum					(A)(B
				Prevalence Index	= B/A =
				Hydrophytic Vegetatio	
				Dominance Test is	
				Prevalence Index is	
				Morphological Adap	otations <sup>1</sup> (Provide supporting or on a separate sheet)
					hytic Vegetation <sup>1</sup> (Explain)
Visit - 20 - Comment		1	= Total Cover	Froblematic Hydrop	Trytic vegetation (Explain)
pody Vine Stratum (Plot size:	)	J.		1 Indicators of hydric soil	and wetland hydrology must
				be present, unless distu	
14.			= Total Cover	Hydrophytic	
				Vegetation	
Bare Ground in Herb Stratum	% Co	ver of Biotic Cru	ıst	Present? Yes	No
emarks:					
					(1-

-	-	÷	
e		1	10
u	u	r	_

Sampling	Point:	
Sampling	r Ollit.	

Depth (inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
Micries)	7.5 VIZ 41/41	106	ZOIOI (IIIOISC) /0 IYPE		Course Sam	
2/	1 4 1 1/1		<del></del>			Saturated
5-4	7.542414	100			Fundy loan	A secolar description
6-10	16 YR 3/Z	100				Organic Harteral/sich
10-12	7.54R 43	100			Sandylour	Supercited 1
			educed Matrix, CS=Covered or Coa	ted Sand Gra		ation: PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> :
- The state of the		ble to all LR	Rs, unless otherwise noted.)			uck (A9) (LRR C)
Histosol (	A1) pedon (A2)		Sandy Redox (S5) Stripped Matrix (S6)			uck (A10) (LRR B)
Black His			Loamy Mucky Mineral (F1)			d Vertic (F18)
	Sulfide (A4)		Loamy Gleyed Matrix (F2)			rent Material (TF2)
	Layers (A5) (LRR C)		Depleted Matrix (F3)			Explain in Remarks)
	k (A9) (LRR D)		Redox Dark Surface (F6)			
Depleted	Below Dark Surface	(A11)	Depleted Dark Surface (F7)		3	
	k Surface (A12)		Redox Depressions (F8)			f hydrophytic vegetation and
	ucky Mineral (S1)		Vernal Pools (F9)			ydrology must be present, sturbed or problematic.
	eyed Matrix (S4)				uniess dis	sturbed or problematic.
	ayer (if present):					
	ISCK					
Type: 2					Undela Sail E	Present? Vos No
					Hydric Soil F	Present? Yes No
Type: <u>2</u> Depth (inch Remarks:	nes): <u>12</u>				Hydric Soil F	Present? Yes No
Type: 20 Depth (inches Remarks:	nes): <u>12</u>				Hydric Soil F	Present? Yes No
Type: 20 Depth (inch Remarks:  YDROLOG Vetland Hydr	nes): 12	e required; ch	neck all that apply)			Present? Yes No
Type: 20 Depth (inches Remarks:  YDROLOG Vetland Hydromary Indica	nes): 1Z  iY rology Indicators: tors (minimum of one	e required; ch	neck all that apply) Salt Crust (B11)		Second	
Type: 20 Depth (inche Remarks:  YDROLOG Vetland Hydr rimary Indicat Surface W	iY rology Indicators: tors (minimum of one	e required; ch			Second	ary Indicators (2 or more required)
Type:	rology Indicators: tors (minimum of one /ater (A1) er Table (A2)	e required; ch	Salt Crust (B11)		Second — Wa — Sec	ary Indicators (2 or more required) ter Marks (B1) ( <b>Riverine</b> )
Type:	rology Indicators: tors (minimum of one /ater (A1) er Table (A2)		Salt Crust (B11) Biotic Crust (B12)		<u>Second</u> Wa Sec Dril	ary Indicators (2 or more required) ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> )
Type:	rology Indicators: tors (minimum of one vater (A1) er Table (A2) (A3)	<b>a</b> )	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Living Roots	Second Wa Sec Drit	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine)
Type:	rology Indicators: tors (minimum of one /ater (A1) er Table (A2) (A3) rks (B1) (Nonriverine	e) iverine)	<ul><li>Salt Crust (B11)</li><li>Biotic Crust (B12)</li><li>Aquatic Invertebrates (B13)</li><li>Hydrogen Sulfide Odor (C1)</li></ul>		Second Wa Sec Drift Dra s (C3) Dry Cra	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) if Deposits (B3) (Riverine) uinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8)
Type: 20 Depth (inch Remarks:  YDROLOG Vetland Hydr Trimary Indicat Surface W High Wate Saturation Water Mar Sediment Drift Depos	rology Indicators: tors (minimum of one /ater (A1) er Table (A2) (A3) rks (B1) (Nonriverine Deposits (B2) (Nonri	e) iverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along</li> </ul>	4)	Second Wa Sec Drift Dra s (C3) Dry Cra	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) uinage Patterns (B10) r-Season Water Täble (C2)
Type: 20 Depth (inch Remarks:  YDROLOG Vetland Hydr Surface W High Wate Saturation Water Mar Sediment Drift Depos Surface So	rology Indicators: tors (minimum of one vater (A1) er Table (A2) (A3) rks (B1) (Nonrivering one vater (B2) (Nonrivering one vater (B2) (Nonrivering one vater (B3) (Nonriv	e) iverine) e)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along</li> <li>Presence of Reduced Iron (C-</li> </ul>	4)	Second  Wa Sec Drit  Dra s (C3) Dry  Cra Sat	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) if Deposits (B3) (Riverine) uinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8)
Type: 20 Depth (inch Remarks:  YDROLOG  Vetland Hydr Surface W High Wate Saturation Water Mar Sediment I Drift Depos Surface So Inundation	rology Indicators: tors (minimum of one vater (A1) er Table (A2) (A3) rks (B1) (Nonrivering Deposits (B2) (Nonrivering bit Cracks (B6)	e) iverine) e)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (Canada Recent Iron Reduction in Tille	4)	Second  Wa Sec Drit Dra S (C3) Cra Sat Sha	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) it Deposits (B3) (Riverine) uinage Patterns (B10) -Season Water Table (C2) syfish Burrows (C8) uration Visible on Aerial Imagery (C
Type: 20 Depth (inch Remarks:  YDROLOG  Vetland Hydr Surface W High Wate Saturation Water Mar Sediment I Drift Depos Surface So Inundation	rology Indicators: tors (minimum of one /ater (A1) er Table (A2) (A3) rks (B1) (Nonrivering Deposits (B2) (Nonrivering sits (B3) (Nonrivering bil Cracks (B6) Visible on Aerial Imalined Leaves (B9) (fions:	e) iverine) e) agery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)	4) d Soils (C6)	Second  Wa Sec Drit Dra S (C3) Cra Sat Sha	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) it Deposits (B3) (Riverine) uinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) uration Visible on Aerial Imagery (Callow Aquitard (D3)
Type:	rology Indicators: tors (minimum of one /ater (A1) er Table (A2) (A3) rks (B1) (Nonriverine Deposits (B2) (Nonriverine bil Cracks (B6) Visible on Aerial Ima ined Leaves (B9) tions:	e) iverine) e) agery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7)	4) d Soils (C6)	Second  Wa Sec Drit Dra S (C3) Cra Sat Sha	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) it Deposits (B3) (Riverine) uinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) uration Visible on Aerial Imagery (Callow Aquitard (D3)
Type: 20 Depth (inches and inches	rology Indicators: tors (minimum of one rater (A1) er Table (A2) (A3) rks (B1) (Nonriverine sits (B3) (Nonriverine bil Cracks (B6) Visible on Aerial Ima ined Leaves (B9) tions: Present? Yes	e) iverine) e) agery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)	4) d Soils (C6)	Second  Wa Sec Drit Dra S (C3) Cra Sat Sha	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) it Deposits (B3) (Riverine) uinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) uration Visible on Aerial Imagery (Callow Aquitard (D3)
Type: 20 Depth (inche Permarks:  YDROLOG Vetland Hydre Permary Indicates Saturation Water Marks Sediment Drift Deposed Surface Sediment Se	rology Indicators: tors (minimum of one rater (A1) er Table (A2) (A3) rks (B1) (Nonriverine sits (B3) (Nonriverine bil Cracks (B6) Visible on Aerial Ima ined Leaves (B9) tions: Present? Yes sent? Yes ary fringe)	e) iverine) ie) agery (B7)  No _ No _ No _	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	4) d Soils (C6)  Wetlan	Second  Wa Second  Drit  Dra  S (C3) Dry  Cra Sat  FAC	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) it Deposits (B3) (Riverine) uinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) uration Visible on Aerial Imagery (Callow Aquitard (D3)
Type: 20 Depth (inche Permarks:  YDROLOG Vetland Hydre Permary Indicates Saturation Water Marks Sediment Drift Deposed Surface Sediment Se	rology Indicators: tors (minimum of one rater (A1) er Table (A2) (A3) rks (B1) (Nonriverine sits (B3) (Nonriverine bil Cracks (B6) Visible on Aerial Ima ined Leaves (B9) tions: Present? Yes sent? Yes ary fringe)	e) iverine) ie) agery (B7)  No _ No _ No _	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	4) d Soils (C6)  Wetlan	Second  Wa Second  Drit  Dra  S (C3) Dry  Cra Sat  FAC	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) it Deposits (B3) (Riverine) uinage Patterns (B10) -Season Water Table (C2) syfish Burrows (C8) uration Visible on Aerial Imagery (Callow Aquitard (D3) C-Neutral Test (D5)
Type: 20 Depth (inche Permarks:  YDROLOG Vetland Hydre Permary Indicates Saturation Water Marks Sediment Drift Deposed Surface Sediment Se	rology Indicators: tors (minimum of one rater (A1) er Table (A2) (A3) rks (B1) (Nonriverine sits (B3) (Nonriverine bil Cracks (B6) Visible on Aerial Ima ined Leaves (B9) tions: Present? Yes sent? Yes ary fringe)	e) iverine) ie) agery (B7)  No _ No _ No _	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	4) d Soils (C6)  Wetlan	Second  Wa Second  Drit  Dra  S (C3) Dry  Cra Sat  FAC	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) it Deposits (B3) (Riverine) uinage Patterns (B10) -Season Water Table (C2) syfish Burrows (C8) uration Visible on Aerial Imagery (Callow Aquitard (D3) C-Neutral Test (D5)
Type: 20 Depth (inche Remarks:  YDROLOG Vetland Hydre Indicated Section Water Mare Section Water Mare Section Water-Stated Observal urface Water Table Preservices capillates capillates capillates Records	rology Indicators: tors (minimum of one rater (A1) er Table (A2) (A3) rks (B1) (Nonriverine sits (B3) (Nonriverine bil Cracks (B6) Visible on Aerial Ima ined Leaves (B9) tions: Present? Yes sent? Yes ary fringe)	e) iverine) ie) agery (B7)  No _ No _ No _	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	4) d Soils (C6)  Wetlan	Second  Wa Second  Drit  Dra  S (C3) Dry  Cra Sat  FAC	ary Indicators (2 or more required) ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) it Deposits (B3) (Riverine) uinage Patterns (B10) -Season Water Table (C2) syfish Burrows (C8) uration Visible on Aerial Imagery (Callow Aquitard (D3) C-Neutral Test (D5)

Project/Steel Last Laboratory Country Search Disgra Country Sampling Date: 3/3/11  Street: CA Sampling Date: 2/2  Investigator(s): C. Sachlad Section, Township, Range: Street: CA Sampling Point: 2/2  Investigator(s): C. Sachlad Section, Township, Range: Deature: Dool Interference of the Control of the Street of Long: Dature: Dool May Uris Name: Steep Country Street C	Project/Site: Las Lilas	City/County: San I	News County Sampling Date: 3/3/11
Section, Township, Range:   Section, Township, Range:   Slope (%); O = Subtregion (RR); LRP			7
Landform (hillslope, lemace, etc.): Gulls Local relief (concave, convex, none): Lander Stope (%): C - Subregion (LRR): Life C Lat Long: Datum: Solidape (hill Name: Species 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? We Are "Normal Circumstances" present? Yes No Are Vegetation Soil or Hydrology is significantly disturbed? We Are "Normal Circumstances" present? Yes No Are Vegetation Present? Yes No (If no edde, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes No within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No			
Subregion (LRR): LRR - State Could land Soli Map Unit Name: State Could land Soli Map (Inc. explain in Remarks.)  Are Vegetation Soli or Hydrology significantly disturbed? Yes Are "Normal Circumstances" present? Yes No Are Vegetation Soli or Hydrology significantly disturbed? Yes Are "Normal Circumstances" present? Yes No Are Vegetation Soli or Hydrology anaturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc Hydrologhytic Vegetation Present? Yes No Within a Wetland? Yes No Within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Within a Wetland? Yes No Withi			
Soil Map Unit Name: Step Gral Live   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 Soil or Hydrology significantly disturbed? See Normal Circumstances' present? Yes No Are Vegetation Soil or Hydrology instantly 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 No Wes No No Wes No No Wes No			
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? Hydrophytic Vegetation Hydrology and Hydrophytic Vegetation Hydrology and Hydrophytic Vegetation Hydrology and Hydrophytic Vegetation Hydrology and Hydrophytic Vegetation Hydrophytic Vegetation Hydrophytic Vegetation (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Hydrophytic Vegetation (Explain) Hydrophytic Vegetation Hydrophytic Vegetation (Provide supporting data in Remarks or on a separate sheet) Hydrophytic Vegetation Hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation Hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation Hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation Hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation Hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation Hydrology must be present, unless disturbed or problematic.	그녀가 되는 것으로 가는 그리고 있다면 하는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없었다.		
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?			
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc  Hydrophytic Vegetation Present?  Hydrophytic Vegetation Present?  Yes			
Hydrophytic Vegetation Present?  Yes X No within a Wetland?  Yes X No within a Wetland?  Wetland Hydrology Present?  Wetland Hydrology Present?  Wetland Hydrology Present?  Presents:  Wetland Hydrology Present?  Yes X No within a Wetland?  Yes X No withi			
Hydric Soil Present? Yes X No within a Wetland? Yes X No x No x No within a Wetland? Yes X No	SUMMARY OF FINDINGS - Attach site	map snowing sampling point	ocations, transects, important features, etc.
Wetland Hydrology Present?   Yes \( \) No   Within a Wetland   Yes \( \) Secils   Will Support via Valued vice betwon, if rest conditionally distantial.    Yes \( \) Yes   Ye			d Area
Remarks: U.S. cleared in drawage of Arbetree of Will Support regulation of plants.  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size:	Hydric Soil Present? Yes Y	No within a Wetla	nd? Yes <u>X</u> No
VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size:	the same of the sa		
Absolute % Cover Species? Status   Society   Status   Sta	will support my land were	o Presence of withand	hydrology come I hydrie soils
Absolute % Cover Species? Status   Dominant Indicator Species? Status   Sta			
Tree Stratum (Plot size:	TECETATION - 000 ocientino names of		Dominance Test worksheet:
2.		% Cover Species? Status	
3.	4		That Are OBL, FACW, or FAC:(A)
A			
That Are OBL, FACW, or FAC: 33 (A/B)	3		Species Across All Strata: (B)
Prevalence Index worksheet:   Total % Cover of:	4,	70 = Total Cover	Percent of Dominant Species
Total % Cover of: Multiply by:	Sapling/Shrub Stratum (Plot size:	)	That Are OBL, FACW, or FAC: (A/B)
3	1,		Control of the Contro
4			
FAC species			
Herb Stratum (Plot size:)			
Herb Stratum (Plot size:)   1.	5		
1. Browns madesfenses 2. Thaka, Thinkle 3.	Herb Stratum (Plot size:)		
Prevalence Index = B/A = 3.6  Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Woody Vine Stratum (Plot size:)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Bare Ground in Herb Stratum 55% % Cover of Biotic Crust Present? Yes No			
4			21-
5			
Prevalence Index is ≤3.0¹ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)  Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  = Total Cover  % Bare Ground in Herb Stratum 552  % Cover of Biotic Crust Present? Yes No			
7 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  8 Total Cover  Woody Vine Stratum (Plot size:)  1 **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  **Hydrophytic Vegetation Present? Yes No			
8			
Woody Vine Stratum (Plot size:)  1 = Total Cover  1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  2 = Total Cover  Ward Problematic Hydrophytic Vegetation (Explain)  1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation  Vegetation  Present? Yes No			data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size:)  1			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
be present, unless disturbed or problematic.  = Total Cover  Hydrophytic Vegetation Present? Yes No<		0.000	
2 = Total Cover Hydrophytic Vegetation Present? Yes No _<	1		
% Bare Ground in Herb Stratum 55% % Cover of Biotic Crust Vegetation Present? Yes No	2		
% Bare Ground in Herb Stratum 554 % Cover of Biotic Crust Present? Yes No X			
Remarks: Vezertein affered between proposity line and read.	% Bare Ground in Herb Stratum%	Cover of Biotic Crust	
i giraran actures servicion proposanto una una recue.	Remarks: 1/ do safe L		al second
	ingerment affect between	an proposed une and	

(inches) Color (moist) % Color (moist)	% Type <sup>1</sup> Loc <sup>2</sup> Texture Remarks
D-12 10/R3/1	S. 1. Inc.
10/10 9/1	Shory warm
و المتعدد	
<del></del>	
<del></del>	
	<u> </u>
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=0	
ydric Soil Indicators: (Applicable to all LRRs, unless otherw	
_ Histosol (A1) Sandy Redox	
Histic Epipedon (A2) Stripped Matri	그 아이들이 그리고 있다.
Black Histic (A3) Loamy Mucky	
_ Hydrogen Sulfide (A4) Loamy Gleyed	
Stratified Layers (A5) (LRR C) Depleted Matr	
1 cm Muck (A9) (LRR D) Redox Dark S	
Depleted Below Dark Surface (A11) Depleted Dark	
Thick Dark Surface (A12) Redox Depres	
Sandy Mucky Mineral (S1) Vernal Pools (	는 사람들이 보고 있는 것이 되었다. 그는 사람들이 되었다면 보고 있는 사람들이 되었다면 보고 있다면 보다면 보고 있다면 보고
_ Sandy Gleyed Matrix (S4)	unless disturbed or problematic.
estrictive Layer (if present):	
Type:	V
Depth (inches):	Hydric Soil Present? Yes X No
DROLOGY	
etland Hydrology Indicators:	Secondary Indicators (2 or more required)
Vetland Hydrology Indicators:  rimary Indicators (minimum of one required; check all that apply)	
Vetland Hydrology Indicators:  rimary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  Salt Crust (B	11) Water Marks (B1) (Riverine)
Vetland Hydrology Indicators:  rimary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Salt Crust (B)  Biotic Crust (I	11) Water Marks (B1) (Riverine) B12) Sediment Deposits (B2) (Riverine)
Vetland Hydrology Indicators:         rimary Indicators (minimum of one required; check all that apply)         ✓ Surface Water (A1)       Salt Crust (B         ➤ High Water Table (A2)       Biotic Crust (B         ✓ Saturation (A3)       Aquatic Invertigation	Mater Marks (B1) (Riverine)  B12) — Sediment Deposits (B2) (Riverine)  tebrates (B13) — Drift Deposits (B3) (Riverine)
Vetland Hydrology Indicators:  rimary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Surface Water Apply  Apply  Apply  Hydrogen Surface  Surface Water Apply  Apply  Apply  Hydrogen Surface  Apply  Hydrogen Surface  Apply  Hydrogen Surface  Marks (B1) (Nonriverine)	11) Water Marks (B1) (Riverine) B12) Sediment Deposits (B2) (Riverine) tebrates (B13) Drift Deposits (B3) (Riverine) Journal Drainage Patterns (B10)
Vetland Hydrology Indicators:  rimary 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)  Oxidized Rhiz	Water Marks (B1) (Riverine)  B12) Sediment Deposits (B2) (Riverine)  tebrates (B13) Drift Deposits (B3) (Riverine)  lfide Odor (C1) Drainage Patterns (B10)  zospheres along Living Roots (C3) Dry-Season Water Table (C2)
Vetland Hydrology Indicators:  rimary 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)  Presence of Face All that apply)  Additionally Biotic Crust (B)  Aquatic Invering  Hydrogen Su  Oxidized Rhiz	Water Marks (B1) (Riverine)  B12) Sediment Deposits (B2) (Riverine)  tebrates (B13) Drift Deposits (B3) (Riverine)  Ifide Odor (C1) Drainage Patterns (B10)  zospheres along Living Roots (C3) Dry-Season Water Table (C2)  Reduced Iron (C4) Crayfish Burrows (C8)
Vetland Hydrology Indicators:         rimary Indicators (minimum of one required; check all that apply)         ✓ Surface Water (A1)       Salt Crust (B)         ➤ High Water Table (A2)       Biotic Crust (C)         ✓ Saturation (A3)       Aquatic Inver         Water Marks (B1) (Nonriverine)       Hydrogen Su         ✓ Sediment Deposits (B2) (Nonriverine)       Oxidized Rhiz         ✓ Drift Deposits (B3) (Nonriverine)       Presence of B         ✓ Surface Soil Cracks (B6)       Recent Iron F	Water Marks (B1) (Riverine)  B12) Sediment Deposits (B2) (Riverine)  tebrates (B13) Drift Deposits (B3) (Riverine)  Ifide Odor (C1) Drainage Patterns (B10)  zospheres along Living Roots (C3) Dry-Season Water Table (C2)  Reduced Iron (C4) Crayfish Burrows (C8)  Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators:         rimary Indicators (minimum of one required; check all that apply)         ✓ Surface Water (A1)       Salt Crust (B         ✓ High Water Table (A2)       Biotic Crust (B         ✓ Saturation (A3)       Aquatic Inver         Water Marks (B1) (Nonriverine)       Hydrogen Su         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhiz         Drift Deposits (B3) (Nonriverine)       Presence of B         Surface Soil Cracks (B6)       Recent Iron F         Inundation Visible on Aerial Imagery (B7)       Thin Muck Su	Water Marks (B1) (Riverine)  B12) Sediment Deposits (B2) (Riverine)  Itebrates (B13) Drift Deposits (B3) (Riverine)  Ifide Odor (C1) Drainage Patterns (B10)  Zospheres along Living Roots (C3) Dry-Season Water Table (C2)  Reduced Iron (C4) Crayfish Burrows (C8)  Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9  Inface (C7) Shallow Aquitard (D3)
Vetland Hydrology Indicators:  rimary 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 Marks (B1)  Other (Explain	Water Marks (B1) (Riverine)  B12) Sediment Deposits (B2) (Riverine)  tebrates (B13) Drift Deposits (B3) (Riverine)  Ifide Odor (C1) Drainage Patterns (B10)  zospheres along Living Roots (C3) Dry-Season Water Table (C2)  Reduced Iron (C4) Crayfish Burrows (C8)  Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators:         rimary Indicators (minimum of one required; check all that apply)         ✓ Surface Water (A1)       Salt Crust (B         ✓ High Water Table (A2)       Biotic Crust (C         ✓ Saturation (A3)       Aquatic Inver         ✓ Water Marks (B1) (Nonriverine)       Hydrogen Su         ✓ Sediment Deposits (B2) (Nonriverine)       Oxidized Rhiz         ✓ Drift Deposits (B3) (Nonriverine)       Presence of Recent Iron F         ✓ Surface Soil Cracks (B6)       Recent Iron F         ✓ Inundation Visible on Aerial Imagery (B7)       Thin Muck St         ✓ Water-Stained Leaves (B9)       Other (Explaination Visible Observations:	Water Marks (B1) (Riverine)  B12) Sediment Deposits (B2) (Riverine)  Itebrates (B13) Drift Deposits (B3) (Riverine)  Ifide Odor (C1) Drainage Patterns (B10)  Zospheres along Living Roots (C3) Dry-Season Water Table (C2)  Reduced Iron (C4) Crayfish Burrows (C8)  Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)  In in Remarks) FAC-Neutral Test (D5)
Vetland Hydrology Indicators:  rimary 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)  Water Stained Leaves (B9)  Depth (inches	Water Marks (B1) (Riverine)  B12) Sediment Deposits (B2) (Riverine)  Itebrates (B13) Drift Deposits (B3) (Riverine)  Ifide Odor (C1) Drainage Patterns (B10)  Zospheres along Living Roots (C3) Dry-Season Water Table (C2)  Reduced Iron (C4) Crayfish Burrows (C8)  Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9  Inface (C7) Shallow Aquitard (D3)  In in Remarks) FAC-Neutral Test (D5)
Vetland Hydrology Indicators:         rimary Indicators (minimum of one required; check all that apply)         ✓ Surface Water (A1)       Salt Crust (B         ➤ High Water Table (A2)       Biotic Crust (C         ✓ Saturation (A3)       Aquatic Inver         Water Marks (B1) (Nonriverine)       Hydrogen Su         ✓ Sediment Deposits (B2) (Nonriverine)       Oxidized Rhiz         ✓ Drift Deposits (B3) (Nonriverine)       Presence of B         ✓ Surface Soil Cracks (B6)       Recent Iron B         ✓ Inundation Visible on Aerial Imagery (B7)       Thin Muck Su         ✓ Water-Stained Leaves (B9)       Other (Explained Leaves)         Iteld Observations:       Ves X       No Depth (inchestater Table Present?         Vater Table Present?       Yes X       No Depth (inchestater)	Water Marks (B1) (Riverine)  B12)
Vetland Hydrology Indicators:  rimary 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)  Ield Observations:  urface Water Present?  Ves No Depth (inchestaturation Present?  Yes No Depth (inchestaturation Present?  Ves No Depth (inchestaturation Present?	Water Marks (B1) (Riverine)  B12)
Vetland Hydrology Indicators:  Verimary 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)  Ield Observations:  Surface Water Present?  Ves No Depth (inchestaturation Present?	Water Marks (B1) (Riverine)  B12)
Vetland Hydrology Indicators:  Verimary 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)  Ield Observations:  Surface Water Present?  Ves No Depth (inchestaturation Present?	Water Marks (B1) (Riverine)  B12)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  ✓ Surface Water (A1) Salt Crust (B  ➤ High Water Table (A2) Biotic Crust (I  ➤ Saturation (A3) Aquatic Inver  — Water Marks (B1) (Nonriverine) Hydrogen Su  — Sediment Deposits (B2) (Nonriverine) Oxidized Rhiz  — Drift Deposits (B3) (Nonriverine) Presence of B  — Surface Soil Cracks (B6) Recent Iron F  — Inundation Visible on Aerial Imagery (B7) Thin Muck Su  — Water-Stained Leaves (B9) Other (Explainational Company (B7) Person Depth (Inchestaturation Present? Yes No Depth (Inchestaturation Present? Ye	Water Marks (B1) (Riverine)  B12)
Vetland Hydrology Indicators:  Varimary 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)  Indicator Visible Present?  Water Table Present?  Ves No Depth (inchestaturation Present?  Ves No Depth (inchestaturation Present?  Ves No Depth (inchestaturation Present?  Ves CNO Depth (inchestaturation Present?	Water Marks (B1) (Riverine)  B12)
Vetland Hydrology Indicators:  Varimary 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)  Indicator Visible Present?  Water Table Present?  Ves No Depth (inchestaturation Present?  Ves No Depth (inchestaturation Present?  Ves No Depth (inchestaturation Present?  Ves CNO Depth (inchestaturation Present?	Water Marks (B1) (Riverine)  B12)
Vetland Hydrology Indicators:  Irimary 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)  Ield Observations:  Urface Water Present?  Ves No Depth (inche aturation Present?  Yes No Depth (inche noldes capillary fringe)  escribe Recorded Data (stream gauge, monitoring well, aerial phoses	Water Marks (B1) (Riverine)  B12)
rimary 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)  Water Stained Leaves (B9)  Water Stained Present?  Yes  No Depth (inchest of the character of the caturation Present?  Yes  No Depth (inchest of the caturation Present?  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes	Water Marks (B1) (Riverine)  B12)

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

Subregion (LRR): LRP-C Soil Map Unit Name:		Section		State: <u>CA</u> Sampling Point: <u>33</u>
Subregion (LRR): LRP-C Soil Map Unit Name:			, Township, Ra	ange:
Subregion (LRR):		Locale		
Soil Map Unit Name:	Lat:	Localii	elief (concave,	convex, none): Lincave Slope (%): 0-
				Long: Datum:
				NWI classification:
Are climatic / hydrologic conditions on the site typical for th	is time of ye	ear? Yes	X No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology				
Are Vegetation, Soil, or Hydrology				
SUMMARY OF FINDINGS – Attach site map			,-	
Hydrophytic Vegetation Present?  Yes X				
Hydric Soil Present? Yes Yes	lo		s the Sampled	d Area nd? Yes No
Wetland Hydrology Present? Yes N				
Remarks: Vege faction Cleared due to agricin Was once a defention basin	for the	coch	nappel in ands?	adjacent orchard. This location
/EGETATION – Use scientific names of plan	ts.			
Tree Stratum (Plot size:)	Absolute % Cover		ant Indicator s? Status	Dominance Test worksheet:
1. Wash Pob	0	yes		Number of Dominant Species That Are OBL, FACW, or FAC:
2.		0		
3.				Total Number of Dominant Species Across All Strata:
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)		= Total	Cover	That Are OBL, FACW, or FAC:(A/B)
1. Wash rob	4	yes	FACE	Prevalence Index worksheet:
2,		0		Total % Cover of: Multiply by:
3				OBL species x 1 =
4				FACW species x 2 =
5	-,/	18.30	-	FAC species x 3 =
Herb Stratum (Plot size:)		= Total (	Cover	FACU species x 4 =
1. Lacci pa vanstutu aquacticum	10	415	UBL	UPL species x 5 =
2. Rum cr. (Rumexcrispus)	5	yes	FACW	Column Totals: (A) (B)
3. De ech (Picris echipides)	10	yes	FAC	Prevalence Index = B/A =
4. Egy cil (Epilobium cilialum)		Do	FACW	Hydrophytic Vegetation Indicators:
5				Dominance Test is >50%
5				Prevalence Index is ≤3.01
7				Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
3				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Mandy Vina Stratum (Dist size)	26	= Total C	Cover	(Explain)
Noody Vine Stratum (Plot size:)	1			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2.				be present, unless disturbed or problematic.
		= Total C	Cover	Hydrophytic
% Bare Ground in Herb Stratum % Cover				Vegetation Present?  Yes No
	the second of the late			
Remarks: appears to have been dame	27 14	the	past a	silled in.
				8

-
1/2
11)

Depth	Matrix			Features		Section 1	60.00
(inches)	Color (moist)	%	Color (maist)	%Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR3-1	100					
			<u> </u>			<del></del>	
			)				
		-					
<del></del>	<u> </u>					2	
Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, CS	Covered or Coated	Sand Gra	ains. Location	on: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all L	RRs, unless other	vise noted.)			Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Redo	k (S5)			k (A9) (LRR C)
Histic Ep	ipedon (A2)		Stripped Mat	rix (S6)		2 cm Muc	k (A10) (LRR B)
Black His	stic (A3)		Loamy Muck	y Mineral (F1)		Reduced	Vertic (F18)
	n Sulfide (A4)		Loamy Gleye	ed Matrix (F2)		Red Parer	nt Material (TF2)
	Layers (A5) (LRR C	3)	Depleted Ma	trix (F3)		Other (Exp	olain in Remarks)
	ck (A9) (LRR D)	*	Redox Dark				
	Below Dark Surface	e (A11)		k Surface (F7)			
	rk Surface (A12)		Redox Depre			3Indicators of h	ydrophytic vegetation and
	ucky Mineral (S1)		Vernal Pools			wetland hyd	rology must be present,
	leyed Matrix (S4)			, , ,		unless distu	rbed or problematic.
	ayer (if present):						
Type:	A Section Control of the Control of						
			_			Hudria Sail Dra	sent? Yes X No
	nes):		_			Hydric Soil Fre	Sellti TesNo
YDROLOG	2V						
	rology Indicators:						
		a managara	shook all that apply			Secondar	v Indicators (2 or more required)
	ators (minimum of or	ne requirea;		and the second			
Surface V			Salt Crust (E				Marks (B1) (Riverine)
High Wate	er Table (A2)		Biotic Crust	(B12)			nent Deposits (B2) (Riverine)
X Saturation			Aquatic Inve	rtebrates (B13)		∠ Drift □	Deposits (B3) (Riverine)
	rks (B1) (Nonriverin	ne)	Hydrogen S	ulfide Odor (C1)		Drain	age Patterns (B10)
	Deposits (B2) (Non		Oxidized Rh	izospheres along Li	ving Roots	(C3) Dry-S	eason Water Table (C2)
	osits (B3) (Nonriveri			Reduced Iron (C4)			sh Burrows (C8)
	oil Cracks (B6)	7.7		Reduction in Tilled	Soils (C6)		ation Visible on Aerial Imagery (C9)
	n Visible on Aerial In	2000 (P7)	Thin Muck S		120/		ow Aquitard (D3)
_		ragery (br)					Neutral Test (D5)
-CARAMET CONT	ined Leaves (B9)		Other (Expla	in in Remarks)		FAC-I	vential rest(D3)
ield Observa							
urface Water	Present? Ye	s No	Depth (inch	es):	1		
/ater Table P			Depth (inch	/			nt 16
aturation Pre			Depth (inch		Wetlan	d Hydrology Pre	esent? Yes X No
ncludes capill	lary fringe)						W 10
escribe Reco	orded Data (stream g	auge, monit	oring well, aerial ph	otos, previous inspe	ctions), if	available:	
emarks:							
ciliains.							
	¥						
	- 1						



roject/Site: Las ( Da (Las pplicant/Owner: Accordance ( E	ernandez Pro		State:	
vestigator(s): 6 Schill	S	A STATE OF THE RESIDENCE OF THE STATE OF THE		
andform (hillslope, terrace, etc.):	L	ocal relief (concave	, convex, none):	Slope (%): 0
ubregion (LRR): LRD-C			Long:	Datum:
ubregion (LRR): LRD-C	and/ Willhoo	& sandy los	NWI classi	fication:
e climatic / hydrologic conditions on the site typ	/	-		
e Vegetation, Soil, or Hydrolog	y significantly dis	sturbed? P » Are	"Normal Circumstances	" present? Yes 😾 No
e Vegetation, Soil, or Hydrolog	y naturally proble	ematic? ان (If n	eeded, explain any ansv	vers in Remarks,)
JMMARY OF FINDINGS – Attach s	te map showing s	ampling point	locations, transect	s, important features, e
lydrophytic Vegetation Present? Yes _	No X	le the Country	a A	
ydric Soil Present? Yes _	No 7	Is the Sample	nd? Yes	No X
	No_ <del></del>			
emarks: Lupper holf of draw upper edoldue to	ago, culture	U	J	
	Absolute D	ominant Indicator	Dominance Test wor	ksheet:
ree Stratum (Plot size: /0 m		pecies? Status	Number of Dominant	
Quercus agritalia	100	X MPI	That Are OBL, FACW	, or FAC: (A)
Also Salin goodingsi	Me/o		Total Number of Domi Species Across All Str	
		Total Cover	Percent of Dominant S That Are OBL, FACW	
apling/Shrub Stratum (Plot size:	_) .		Prevalence Index wo	
			Total % Cover of:	
				x 1 =
			FACW species	
			FAC species	
erb Stratum (Plot size: 10m)	÷.	Total Cover	FACU species UPL species	
Raphons Satorias	955	× up	UPL species 25	
	2.70			110
			Prevalence Index	
			Hydrophytic Vegetati	
			Dominance Test is Prevalence Index	
				aptations <sup>1</sup> (Provide supporting
			data in Remark	s or on a separate sheet)
	7 =7	otal Cover	Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)
ody Vine Stratum (Plot size: 10 m	)	1 low	Indicates at the contract	If and water the design
Vitis gridiana		4 the	be present, unless dist	il and wetland hydrology must urbed or problematic.
	3	otal Cover	Hydrophytic	
of .			Vegetation	🗸
- / - / - / - / - / - / - / - / - / - /	% Cover of Biotic Crust			es No
marks: Ephemeral drainage &	that cute th	bueh a	1d mb/21	1 6
,		111mm 0	and	1 to 601. 1/1 10

		-	
0	-		
-	u		

		1	
Sampling	Point:	ι	

Profile Description: (Describe Depth Matrix		Redo	x Features		
(inches) Color (moist)	% (	Color (moist)	% Type <sup>1</sup>		kture Remarks
0-12 104R3/3	100			Sano	4 liam
					)
			و حسور بنیت		
					the state of the s
Type: C=Concentration, D=Dep	letion, RM=Red	uced Matrix, CS	=Covered or Coated	Sand Grains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applic	able to all LRR	s, unless other	wise noted.)	Indi	icators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Redo			1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)		Stripped Mat			2 cm Muck (A10) (LRR B)
Black Histic (A3)			y Mineral (F1)		Reduced Vertic (F18)
Hydrogen Sulfide (A4)		Loamy Gleye	ed Matrix (F2)	_	Red Parent Material (TF2)
Stratified Layers (A5) (LRR (	3)	Depleted Ma			Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	_	Redox Dark	Surface (F6)		
Depleted Below Dark Surface	e (A11) _	Depleted Da	rk Surface (F7)		
Thick Dark Surface (A12)	_	Redox Depre	essions (F8)		icators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	_	_ Vernal Pools	(F9)		etland hydrology must be present,
Sandy Gleyed Matrix (S4)				u	nless disturbed or problematic.
Restrictive Layer (if present):					
Type:					1-
Depth (inches):Remarks: No hydric	soil ind	waters	obswed		ic Soil Present? Yes No <u>X</u>
emarks: No hydric	soil ind	waters	obsined		ic Soil Present? Yes No <u>X</u>
Pemarks: No hydric	soil ind	waters	obswed		ic Soil Present? Yes No <u>X</u>
YDROLOGY Vetland Hydrology Indicators:					
YDROLOGY Vetland Hydrology Indicators:					Secondary Indicators (2 or more required)
Pemarks: We have the comment of the		ck all that apply)	) 311)		Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or		ck all that apply)	) 311)		Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)
Pemarks: We have the comment of the		ck all that apply) Salt Crust (E Biotic Crust Aquatic Inve	311) (B12) ertebrates (B13)		Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)
Pemarks: We had	ne required; che	eck all that apply) Salt Crust (E Biotic Crust Aquatic Inve	B11) (B12) ertebrates (B13) ulfide Odor (C1)		Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
Pemarks: We had	ne required; che	eck all that apply) Salt Crust (E Biotic Crust Aquatic Inve	B11) (B12) ertebrates (B13) ulfide Odor (C1)		Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverial	ne required; che ne ne)	Sck all that apply) Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh	B11) (B12) ertebrates (B13) ulfide Odor (C1)		Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Non-	ne required; che ne ne)	Sck all that apply) Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh	) B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi	ing Roots (C3)	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)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Nonrivering Sediment Deposi	ne required; che ne) nriverine)	Sck all that apply) Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled S	ing Roots (C3)	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)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverial Sediment Deposits (B2) (Non Drift Deposits (B3) (Nonriverial Surface Soil Cracks (B6) Inundation Visible on Aerial In	ne required; che ne) nriverine)	Salt Crust (E Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled So	ing Roots (C3)	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)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverial Sediment Deposits (B2) (Non Drift Deposits (B3) (Nonriverial Surface Soil Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9)	ne required; che ne) nriverine)	Salt Crust (E Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled S	ing Roots (C3)	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)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Non- Drift Deposits (B3) (Nonrivering Surface Soil Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9)  eld Observations:	ne required; che ne) ariverine) ine)	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled Sourface (C7) ain in Remarks)	ing Roots (C3)	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)
VDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverial Sediment Deposits (B2) (Nonriverial Sediment Deposits (B3) (Nonriverial Surface Soil Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9) Inield Observations: unface Water Present?	ne required; che ne) nriverine) ine) magery (B7)	Salt Crust (E Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled Sourface (C7) ain in Remarks)	ing Roots (C3)	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)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverial Sediment Deposits (B2) (Non Drift Deposits (B3) (Nonriverial Surface Soil Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9)  Veter Cater Table Present?  Veter Table Present?	ne required; che ne) nriverine) ine) magery (B7)	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled Sourface (C7) ain in Remarks) nes):	ing Roots (C3)	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)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverial Sediment Deposits (B2) (Non Drift Deposits (B3) (Nonriverial Surface Soil Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9)  Veter Water Present?  Veter Table Present?  Veter Table Present?	ne required; che ne) nriverine) ine) magery (B7)	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled Sourface (C7) ain in Remarks)	ing Roots (C3)	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)
Por Control of the Co	ne required; che  ne)  nriverine)  ine)  magery (B7)  es No  es No  es No	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi FReduced Iron (C4) Reduction in Tilled Si Surface (C7) ain in Remarks) nes): nes):	ing Roots (C3) oils (C6) Wetland Hyd	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)
POROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Non- Drift Deposits (B3) (Nonrivering Surface Soil Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9)  Veter Table Present?	ne required; che  ne)  nriverine)  ine)  magery (B7)  es No  es No  es No	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi FReduced Iron (C4) Reduction in Tilled Si Surface (C7) ain in Remarks) nes): nes):	ing Roots (C3) oils (C6) Wetland Hyd	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)
YDROLOGY  Vetland Hydrology Indicators:  Irimary Indicators (minimum of or  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonrivering  Sediment Deposits (B2) (Nonrivering  Surface Soil Cracks (B6)  Inundation Visible on Aerial Inguity  Water-Stained Leaves (B9)  ield Observations:  urface Water Present?  Vater Table Present?	ne required; che ne) iniverine) ine) magery (B7) es No es No gauge, monitorin	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled Sourface (C7) ain in Remarks) nes): nes): nes):	ing Roots (C3) oils (C6) Wetland Hyd	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)
POROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Non- Drift Deposits (B3) (Nonrivering Surface Soil Cracks (B6) Inundation Visible on Aerial Ing Water-Stained Leaves (B9)  Veter Table Present?	ne required; che ne) iniverine) ine) magery (B7) es No es No gauge, monitorin	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled Sourface (C7) ain in Remarks) nes): nes): nes):	ing Roots (C3) oils (C6) Wetland Hyd	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)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Non- Drift Deposits (B3) (Nonrivering Surface Soil Cracks (B6) Inundation Visible on Aerial Ing Water-Stained Leaves (B9)  eld Observations: Urface Water Present? Veriface Water Present?	ne required; che ne) iniverine) ine) magery (B7) es No es No gauge, monitorin	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled Sourface (C7) ain in Remarks) nes): nes): nes):	ing Roots (C3) oils (C6) Wetland Hyd	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)
PROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Non- Drift Deposits (B3) (Nonrivering Surface Soil Cracks (B6) Inundation Visible on Aerial Ing Water-Stained Leaves (B9) eld Observations: Urface Water Present? Veter Table Present?	ne required; che ne) iniverine) ine) magery (B7) es No es No gauge, monitorin	Salt Crust (E Biotic Crust Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Thin Muck S Other (Expla	B11) (B12) ertebrates (B13) ulfide Odor (C1) nizospheres along Livi Reduced Iron (C4) Reduction in Tilled Sourface (C7) ain in Remarks) nes): nes): nes):	ing Roots (C3) oils (C6) Wetland Hyd	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)

Project/Site: Lat Lidas	M	City/Cour	nty:	50 conty Sampling Date: 7/6//		
Applicant/Owner: Accretive (Kamurua Josa)			State: Sampling Point: 7			
1 - 1 -/1		Section, Township, Range:				
그 아이들이 얼마나 아니들이 얼마나 아니를 어느						
soil Map Unit Name: Cunaba Coarse Sandy Loan						
	()					
Are climatic / hydrologic conditions on the site typical for				~		
Are Vegetation, Soil, or Hydrology						
Are Vegetation, Soil, or Hydrology	_ naturally pro	oblematic?	No (If n	needed, explain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site ma	p showing	sampli	ng point	locations, transects, important features, e		
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Yes  Yes  Yes  Yes	No No		the Sample thin a Wetla	1.7		
EGETATION – Use scientific names of pla	11.4.04					
Tree Stratum (Plot size:	Absolute % Cover		nt Indicator	Dominance Test worksheet:		
1. Quercus agrifolia		YK5	UR	Number of Dominant Species That Are OBL, FACW, or FAC:		
2. Kelin Lawigada	70	yes	FACW			
3.		-0		Total Number of Dominant Species Across All Strata:  (B)		
l						
	80	= Total C	over	Percent of Dominant Species That Are OBL, FACW, or FAC: 43% (A/B)		
Sapling/Shrub Stratum (Plot size:)						
A				Prevalence Index worksheet:		
*				Total % Cover of: Multiply by:  OBL species x 1 =		
•				FACW species x 2 =		
				FAC species x3 =		
		= Total Co	over	FACU species x 4 =		
lerb Stratum (Plot size:)		- rotar ot	JVG1	UPL species x 5 =		
Typha latitolia	#35	yes	03L	Column Totals: (A) (B)		
· Picus exhibides	5	75	FAU			
Roscipa naustartan against	a 15	yes	034	Prevalence Index = B/A =		
				Hydrophytic Vegetation Indicators:		
				Dominance Test is >50%		
				Prevalence Index is ≤3.0¹		
·				Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)		
		÷		Problematic Hydrophytic Vegetation¹ (Explain)		
/oody Vine Stratum (Plot size:)		= Total Co	ver			
Votis gridienes	5	yes	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must		
7				be present, unless disturbed or problematic.		
		= Total Co	ver	Hydrophytic Vegetation		
	er of Biotic Cru	ıst		Present? Yes No		
emarks:						

		20	
C	0	11	
u	u		

	.)
Sampling Point:	
Camping Folia	

Depth Matrix	Redox Features	2	D. Carlotte
(inches) Color (moist) %		oc² Texture	Remarks
D-17 10/R 3/1 40	20		
			S.
	<del></del>	-	
	<u> </u>		
	* <del></del>		
Type: C=Concentration, D=Depletion, I	RM=Reduced Matrix, CS=Covered or Coated Sa	nd Grains. <sup>2</sup> Locat	ion: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)	1 cm Mu	ck (A9) (LRR C)
	Stripped Matrix (S6)		ck (A10) (LRR B)
Histic Epipedon (A2)	Suipped Matrix (30) Loamy Mucky Mineral (F1)		Vertic (F18)
Black Histic (A3)			ent Material (TF2)
X Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		xplain in Remarks)
_ Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (E	xpiairi iri Kemarks)
_ 1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
<ul> <li>Depleted Below Dark Surface (A11)</li> </ul>		3	
Thick Dark Surface (A12)	Redox Depressions (F8)		hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)		drology must be present,
Sandy Gleyed Matrix (S4)		unless dist	urbed or problematic.
lestrictive Layer (if present):			
Type:			6.0
Type.			
		Hydric Soil Pr	esent? Yes X No
Depth (inches):	Simple pit; creek Flowing		resent? Yes X No
Depth (inches):emarks: Soil Saturated at	Sample pit; creek Flowing		resent? Yes X No
Depth (inches):emarks: Soll Saturated et	sample pit; week Flowing		resent? Yes X No
Depth (inches):		nearby.	
Depth (inches):		near by.	ry Indicators (2 or more required)
Depth (inches):  Jemarks: Sulfaturated at  DROLOGY  Vetland Hydrology Indicators:  rimary Indicators (minimum of one requirement)		near by.	
Depth (inches):emarks:	ired; check all that apply) Salt Crust (B11)	Near by.  Seconda  X Wat	ry Indicators (2 or more required)
Depth (inches):emarks:	ired; check all that apply) Salt Crust (B11) Biotic Crust (B12)	Near boy.  Seconda  X Wate  Y Sed	ery Indicators (2 or more required) er Marks (B1) ( <b>Riverine</b> ) iment Deposits (B2) ( <b>Riverine</b> )
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)	Seconda  X Wate  X Sedi  X Drift	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine)
Depth (inches):emarks:	ired; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)	Seconda  X Wate  X Sedi  Drift  Drai	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  e) Oxidized Rhizospheres along Living	Seconda  X Wate  X Sedi  Drift  Drait  Roots (C3) Dry-	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  e) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	Seconda  'X Wate  Y Sedi  X Drift  Drai  Roots (C3) Dry Cray	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  e) Oxidized Rhizospheres along Living	Seconda  'X Wate  Y Sedi  X Drift  Drai  Roots (C3) Dry Cray	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  e) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	Seconda  X Wate  X Sedi  Drai  Roots (C3) Dry-  Cray s (C6) Satu	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  e) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	Seconda  X Wate  X Sedi  X Drift  Drai  Roots (C3) Dry-  Cray  s (C6) Satu  Shal	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) iration Visible on Aerial Imagery (C9
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7)	Seconda  X Wate  X Sedi  X Drift  Drai  Roots (C3) Dry-  Cray  s (C6) Satu  Shal	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) eration Visible on Aerial Imagery (C9) low Aquitard (D3)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7) Other (Explain in Remarks)	Seconda  X Wate  X Sedi  X Drift  Drai  Roots (C3) Dry-  Cray  s (C6) Satu  Shal	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) eration Visible on Aerial Imagery (C9) low Aquitard (D3)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7) Other (Explain in Remarks)	Seconda  X Wate  X Sedi  X Drift  Drai  Roots (C3) Dry-  Cray  s (C6) Satu  Shal	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) eration Visible on Aerial Imagery (C9) low Aquitard (D3)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Seconda  X Wate  X Sedi  X Drift  Drai  Roots (C3) Dry-  Cray  Seconda  Y Sedi  Sedi  A Drift  Drai  FAC	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imagery (C9 low Aquitard (D3) -Neutral Test (D5)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Seconda  X Wate  X Sedi  X Drift  Drai  Roots (C3) Dry-  Cray  Seconda  Y Sedi  Sedi  A Drift  Drai  FAC	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) eration Visible on Aerial Imagery (C9) low Aquitard (D3)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): No Depth (inches):	Seconda  X Wate  Y Sedi  X Drift  Drai  Roots (C3) Dry-  Cray  Seconda  Y Sedi  X Drift  Drai  FAC	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imagery (C9 low Aquitard (D3) -Neutral Test (D5)
Depth (inches):  Depth	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Seconda  X Wate  Y Sedi  X Drift  Drai  Roots (C3) Dry-  Cray  Seconda  Y Sedi  X Drift  Drai  FAC	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) iration Visible on Aerial Imagery (C9 low Aquitard (D3) -Neutral Test (D5)
Depth (inches):    Comparison	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) e) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): 2 // No Depth (inches):	Seconda  X Wate  Y Sedi  Solid  Drai  Roots (C3) Dry-  Cray  Satu  Shal  FAC  Wetland Hydrology P	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C9 low Aquitard (D3) -Neutral Test (D5)
Depth (inches):    Comparison	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) e) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): 2 // No Depth (inches):	Seconda  X Wate  Y Sedi  Solid  Drai  Roots (C3) Dry-  Cray  Satu  Shal  FAC  Wetland Hydrology P	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C9 low Aquitard (D3) -Neutral Test (D5)
Depth (inches):  Jack Local Land Hydrology Indicators: rimary Indicators (minimum of one requiver Marks)  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 Water-Stained Leaves (B9)  eld Observations: Urface Water Present? Ves X Saturation Present? Ves X Saturation Present? Ves X Saturation Present? Saturation Present? Secribe Recorded Data (stream gauge, 1985)	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): No Depth (inches):	Seconda  X Wate  Y Sedi  Solid  Drai  Roots (C3) Dry-  Cray  Satu  Shal  FAC  Wetland Hydrology P	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C9 low Aquitard (D3) -Neutral Test (D5)
Popology  Torontogy  T	ired; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) e) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): 2 // No Depth (inches):	Seconda  X Wate  Y Sedi  Solid  Drai  Roots (C3) Dry-  Cray  Satu  Shal  FAC  Wetland Hydrology P	ery Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) rfish Burrows (C8) aration Visible on Aerial Imagery (C9 low Aquitard (D3) -Neutral Test (D5)

pplicant/Owner: Accretic (Kaum			State: Sampling Date: 7/6/
6		Section, Township, R	Range:
andform (hillslope, terrace, etc.): Flat		Local relief (concave	e, convex, none): Slope (%):
1000	Lat:		Long: Datum:
oil Map Unit Name: Steep bulled Law	1		NWI classification:
e climatic / hydrologic conditions on the site typical for			
e Vegetation, Soil, or Hydrology			1 0
e Vegetation, Soil, or Hydrology		110	The second secon
		, 0	
UMMARY OF FINDINGS – Attach site ma	p showing	sampling point	locations, transects, important features,
Hydrophytic Vegetation Present? Yes	No X	Is the Sample	d Area
lydric Soil Present? Yes	No_K	within a Wetla	
Vetland Hydrology Present? Yes	No E	within a vvena	110
emarks:	,		
GETATION – Use scientific names of pla	nts.		
ee Stratum (Plot size: Zow)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
Quercus agrifica	95%	Yes UPL	Number of Dominant Species That Are OBL, FACW, or FAC:  (A
Constant of the constant of th		-0-	
			Total Number of Dominant Species Across All Strata:  (B
2-	95	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A
apling/Shrub Stratum (Plot size: 20 m)	,		
Toxicolendron diversitaba	5	yes up	Prevalence Index worksheet:
			Total % Cover of: Multiply by:
	-		OBL species x 1 =
	<del>-</del>		FACW species x 2 = FAC species x 3 =
		- T-t-l C-v	FACU species x 4 =
rb Stratum (Plot size:)		= Total Cover	UPL species / 0 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 ≤3.01
			Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
adu Vian Statum (District		Total Cover	
ody Vine Stratum (Plot size:)	-€		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
			be present, unless disturbed or problematic.
		Total Cover	Hydrophytic
K		Total Cover	Vegetation
Bare Ground in Herb Stratum % Cove	r of Biotic Cru	st	Present? Yes No
	6	1 1	
marks:	ste a 1.	100	0.1
narks: Ephernual drainage suppor	rts only	up levne ri	parian species.

	eded to document the indicator or	
Depth Matrix (inches) Color (moist) % Co	Redox Features  olor (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture Remarks
Miletice)		
10-10 104R3/3 Woo		
	حالصينية حتاجا يقعصا	<u> </u>
		وحراف والمستحدم والمستجوا إلى
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Redu	and Matrix, CS=Covered or Costed S	Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs.	unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
		1 cm Muck (A9) (LRR C)
	_ Sandy Redox (S5)	2 cm Muck (A10) (LRR B)
	_ Stripped Matrix (S6)	
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
	Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)	
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
Thick Dark Surface (A12)	Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)		unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
		Hydric Soil Present? Yes No
Depth (inches):		Trydric Boll Freschit. Tes No
YDROLOGY		
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; chec	k all that apply)	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; chec	k all that apply) Salt Crust (B11)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; chec  Surface Water (A1)	_ Salt Crust (B11)	Water Marks (B1) (Riverine)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; chec  Surface Water (A1)  High Water Table (A2)	Salt Crust (B11) Biotic Crust (B12)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; chec Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	<ul><li>Water Marks (B1) (Riverine)</li><li>Sediment Deposits (B2) (Riverine)</li><li>Drift Deposits (B3) (Riverine)</li></ul>
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; chec  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	<ul><li>Water Marks (B1) (Riverine)</li><li>Sediment Deposits (B2) (Riverine)</li><li>Drift Deposits (B3) (Riverine)</li><li>Drainage Patterns (B10)</li></ul>
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; chect Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; chect  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ng Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; chect Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ng Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit Presence of Reduced Iron (C4)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ng Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; chect  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)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc	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)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check 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 Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Mück Surface (C7) Other (Explain in Remarks)	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)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check 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 Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Mück Surface (C7) Other (Explain in Remarks)	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)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check 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)  Field Observations:  Surface Water Present?  Yes X	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Mück Surface (C7) Other (Explain in Remarks)  Depth (inches):	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)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check 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)  Field Observations: Surface Water Present?  Water Table Present?  Yes No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches):  Depth (inches):	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)
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Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check 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)  Field Observations:  Surface Water Present?  Water Table Present?  Yes No  Saturation Present? Yes No  Saturation Present? Yes No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	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)  Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check 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)  Field Observations: Surface Water Present?  Water Table Present?  Yes No	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	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)  Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; chect  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)  Field Observations:  Surface Water Present? Yes No  Water Table Present? Yes No  Saturation Present? Yes No  Saturation Present? Yes No  Security Saturation Present (Stream gauge, monitoring Control of Stream	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Mück Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches):	Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Ing Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
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WETLAND D	ETERMINATION DATA FORM	1 - Arid West Region
Project/Site: Las Lilas	City/County:	County Sampling Date: 7/6/1/
Applicant/Owner: Accretive (Kamura		State: CA Sampling Point: 4
Investigator(s): 6. Schiel		
		s, convex, none): Slope (%):
		Long: Datum:
Soil Map Unit Name: Fallbrook Sand		
Are climatic / hydrologic conditions on the site typical		
Are Vegetation, Soil, or Hydrology		
Are Vegetation, Soil, or Hydrology	naturally problematic? U, (If n	reeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site n	nap showing sampling point	locations, transects, important features, etc
Hydrophytic Vegetation Present?  Hydric Soil Present?  Yes   Yes	No Is the Sample No within a Wetla	d Area
VEGETATION – Use scientific names of p	Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: Z (A)
1. Wuercus agri Folia	John 30 WS att	That Are OBL, FACW, or FAC: (A)
3.		Total Number of Dominant Species Across All Strata:  (B)
4.		
Sapling/Shrub Stratum (Plot size:)	30 = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:
1		Prevalence Index worksheet:
2		Total % Cover of:Multiply by:
3		OBL species x 1 =
4		FACW species x 2 =
5		FAC species x 3 =
Herb Stratum (Plot size: 10 m	= Total Cover	FACU species x 4 =
1. Rossin parsivier aquation	20 yes 08L	UPL species x 5 =
2 Trops latifolia	5 NO OBL	Column Totals: (A) (B)
3. I Cyperus evagrostis	5 No FAEW	Prevalence Index = B/A =
4.		Hydrophytic Vegetation Indicators:
5.		Dominance Test is >50%
6		Prevalence Index is ≤3.01
7		Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8	70	Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 10 m)	30 = Total Cover	
1. V. A. S	40 yes FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<del>*</del>	40 = Total Cover	Hydrophytic
% Bare Ground in Herb Stratum % Co	over of Biotic Crust	Vegetation Present?  Yes Y No
Remarks:		
remarks.		

Profile Desc	ription: (Describe to the de	pth needed to document the indicator or o	onfirm the absence of indicators.)
Depth	Matrix	Redox Features	
(inches)	Color (moist) %	Color (moist) % Type <sup>1</sup> L	oc <sup>2</sup> Texture Remarks
0-12	10 /R 3/1		
Type: C=Co	ncentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sa	and Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
ydric Soil Ir	ndicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils*:
Hydric Soil Indicators: (Applicable to all LR  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)		<ul> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> <li>Depleted Matrix (F3)</li> <li>Redox Dark Surface (F6)</li> <li>Depleted Dark Surface (F7)</li> </ul>	<ul> <li>1 cm Muck (A9) (LRR C)</li> <li>2 cm Muck (A10) (LRR B)</li> <li>Reduced Vertic (F18)</li> <li>Red Parent Material (TF2)</li> <li>Other (Explain in Remarks)</li> </ul>
Sandy Mu	k Surface (A12) icky Mineral (S1) eyed Matrix (S4)	<pre> Redox Depressions (F8) Vernal Pools (F9)</pre>	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
	yer (if present):		
Type:			
Type: Depth (inch	nes):	= + Sample pit 1 12 de	Hydric Soil Present? Yes X No
Type: Depth (inchemarks:	poil Si funa fed, og	= + Sample pit; Wader	
Type: Depth (inchemarks:  DROLOG etland Hydr	ology Indicators:		Kebli high
Type:	ology Indicators: tors (minimum of one required	d; check all that apply)	Secondary Indicators (2 or more required)
Type:	ology Indicators:  tors (minimum of one required dater (A1) er Table (A2)		Secondary Indicators (2 or more required)  Y Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)
DROLOG etland Hydr mary Indica Surface W High Wate Saturation Water Mar Sediment	ology Indicators: tors (minimum of one required vater (A1) or Table (A2) (A3) cks (B1) (Nonriverine) Deposits (B2) (Nonriverine)	d; check all that apply) Salt Crust (B11) Biotic Crust (B12)	Secondary Indicators (2 or more required)  Y Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
Depth (inchemarks:  DROLOGetland Hydrimary Indica Surface Welligh Water Mare Saturation Water Mare Sediment Drift Depo	ology Indicators: tors (minimum of one required (ater (A1) er Table (A2) (A3) eks (B1) (Nonriverine) Deposits (B2) (Nonriverine) sits (B3) (Nonriverine) oil Cracks (B6) Visible on Aerial Imagery (B7)	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  g Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Type:	ology Indicators: tors (minimum of one required (A3) rks (B1) (Nonriverine) Deposits (B2) (Nonriverine) sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Imagery (B7 ined Leaves (B9)	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  g Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C8)  Shallow Aquitard (D3)
Type:	ology Indicators: tors (minimum of one required (A3) rks (B1) (Nonriverine) Deposits (B2) (Nonriverine) sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Imagery (B7 ined Leaves (B9) tions:	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi 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)  g Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C8)  Shallow Aquitard (D3)
Type:	ology Indicators: tors (minimum of one required (A3) rks (B1) (Nonriverine) Deposits (B2) (Nonriverine) sits (B3) (Nonriverine) oil Cracks (B6) Visible on Aerial Imagery (B7 ined Leaves (B9) tions: Present?  Yes X	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi 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)  g Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (CS)  Shallow Aquitard (D3)
Type:	ology Indicators: tors (minimum of one required (A3) rks (B1) (Nonriverine) Deposits (B2) (Nonriverine) sits (B3) (Nonriverine) bil Cracks (B6) Visible on Aerial Imagery (B7 ined Leaves (B9) tions: Present? Yes X	Salt Crust (B11)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livin  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soi  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)  g Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Is (C6) Saturation Visible on Aerial Imagery (C3)  Shallow Aquitard (D3)

Creck bottom suports 15 ff i hannel of cattand under Oak rijeni

Project/Site: Las Lilas	(	City/County: 54 1	Die Courty	Sampling Date: 3/10/10
Applicant/Owner: Accretive			State: CVA S	The state of the s
			ange:	
Landform (hillslope, terrace, etc.): Cully				Slope (%): 0 - <
Subregion (LRR): LR2-C				Datum:
Soil Map Unit Name: Step bulled Land				
Are climatic / hydrologic conditions on the site typica				
Are Vegetation, Soil, or Hydrology				
Are Vegetation, Soil, or Hydrology				
SUMMARY OF FINDINGS - Attach site				
	.,			
	vdric Soil Present? Yes No Y			×
	No ×	within a Wetla	nd? Yes	_ No _X
Charmels be prevent exosion		pupas. l	leze parton debii	s placed in
VEGETATION – Use scientific names of				A. 42
Tree Stratum (Plot size:)		Dominant Indicator Species? Status	Dominance Test worksh	
1. Salix Carigada (1)	2	yes FACW	Number of Dominant Spe- That Are OBL, FACW, or	
2. Overcus agrifolia (3-4)	10		Total Number of Dominan	
3			Species Across All Strata:	
4			Percent of Dominant Spec	ries
Capling/Shrub Stratum / Dlot cizo:	_12_=	Total Cover	That Are OBL, FACW, or	
Sapling/Shrub Stratum (Plot size:	,		Prevalence Index works	heet:
2.			Total % Cover of:	
3.			OBL species	
4.			FACW species 2	_ x2= _ 4
5			FAC species	
Harb Chatter (Distains)	=	Total Cover	FACU species UPL species	x 4 =
1. Branca rica (Rhaphnus.	(1-)40	Upc 110L		
2. Ite from Whistle (Carduns 40		DO WPL	Column Totals: 52	
3. Browns diandieur	7.5	NO LIPL	Prevalence Index =	B/A = 4.8
4. Engolina se	2	NU UPL	Hydrophytic Vegetation	
			Dominance Test is >5	50%
6			Prevalence Index is ≤	
7			Morphological Adapta	tions <sup>1</sup> (Provide supporting r on a separate sheet)
8			Problematic Hydrophy	Committee of the second
Mondy Vino Stratum (Blot size:	<u> </u>	Total Cover		as vegetation (Explain)
Woody Vine Stratum (Plot size:)			<sup>1</sup> Indicators of hydric soil ar	nd wetland hydrology must
1			be present, unless disturbe	
٤		Total Cover	Hydrophytic	
N D CONTRACTOR			Vegetation	W V
% Bare Ground in Herb Stratum %	Cover of Biotic Crus	St	Present? Yes _	No X
Remarks:				
			*	

Profile Description: (Describe to the de	epth needed to document the indicator or	confirm the absence of indicators.)
Depth Matrix (inches) Color (moist) %	Redox Features  Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture Remarks
1000	Color (Moist) 76 Type	
0-12 10483/3		Loan
<u> </u>	ب بسید بسید بسید بیشت	Carried Statement of the Control of
	· · · · · · · · · · · · · · · · · · ·	
	بالمحصور مستند مستندست	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM	M=Reduced Matrix, CS=Covered or Coated	Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a	II LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
Histic Epipedón (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2) Other (Explain in Remarks)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3) Redox Dark Surface (F6)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)  Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
Depleted Below Dark Surface (ATT) Thick Dark Surface (A12)	Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)		unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inchés):		Hydric Soil Present? Yes No.X
Remarks: No hydric soil indi		
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one require	ed: check all that apply)	Secondary Indicators (2 or more required)
✓ Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) (Riverine)
✓ High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)		
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled S	
Inundation Visible on Aerial Imagery (B		Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
	No Depth (inches): _ Z	
	No Depth (inches):	VC-
	No Depth (inches): 4"	Wetland Hydrology Present? Yes 🔻 No 🗡
(includes capillary fringe)	NO Deptil (inches)/	Wedana Hydrology Freschit, Tes Its
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos, previous inspe	ctions), if available:
Remarks:		
Ephemeral drawage	2-5 H until Oaks &	Les 15 44 de Go
61.	1	- 13 11 - Dence.
Vak pation wetla	vel upstream non.	Hand wohen ( 14)
* False positive for but al	me du do ala d mise	Len 15 Ht to Fence. Hand wohn (dist.)
100 00 100 100 000 000	gy own to recent rowns.	

Project/Site: Las Cilas		City/County:	Sand	Duge County Sampling Date: 3/10/1	
Applicant/Owner:		State: CA Sampling Point: 3(			
Investigator(s): G Scheed		Section, Township, Range:			
Landform (hillslope, terrace, etc.): <u>Gull</u> Subregion (LRR): <u>LRR</u> -C	77 hillslope Lat:	Local relief (	concave,	convex, none):         Convex         Slope (%):         Detum:	
Soil Map Unit Name: Placentia So			NWI classification:		
are Vegetation, Soil, or Hydro	ology significantly property naturally pro	disturbed? Coblematic?	PS Are	"Normal Circumstances" present? Yes No	
Hydrophytic Vegetation Present? Ye Hydric Soil Present? Ye Wetland Hydrology Present? Ye	es No X es No Y No Y	Is the	Sampled a Wetla	d Area nd? Yes NoX	
Vegetation cleaned for		LOW Ple	n ch	enrel obsured by ung/nucluel	
Tree Stratum (Plot size:) 1		Species?		Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: (A)	
2				Total Number of Dominant Species Across All Strata: (B)	
Sapling/Shrub Stratum (Plot size:	\	= Total Cove	r	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B	
1. Bacchair salrafilia	(410) 7	yes F	Acus	Prevalence Index worksheet:	
Salie Casingin (10-spr	100 fg) (Ko) Z	yes	FACU	Total % Cover of: Multiply by:	
				OBL species x1 = FACW species 4	
				FAC species	
lerb Stratum (Plot size:)		= Total Cove		FACU species	
Rhankanus Schwa	20	422 L	IPL	20 1/1	
Avena has baba	10	1	IPL	(-)	
Hordens Co.	2		PL	Prevalence Index = B/A = 4.6	
Bronnes dianders	40		PL	Hydrophytic Vegetation Indicators:	
Bromes madistenses	10		(PL	Dominance Test is >50%	
Picris echinides			STAC	— Prevalence Index is ≤3.01	
An prosia psilostely a		No F	AC	Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	
	94	= Total Cover		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
/oody Vine Stratum (Plot size:				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
		= Total Cover		Hydrophytic Vegetation	
Bare Ground in Herb Stratum	_ % Cover of Biotic Cr	rust		Present? Yes No	
Remarks:					
				*	

	lepth needed to document the indicat	or or confirm the ab	sence of indicators.)
Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type	e <sup>1</sup> Loc <sup>2</sup> Tex	ture Remarks
0-18 107R3/3			
	· —		
		d	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Type: C=Concentration, D=Depletion, R lydric Soil Indicators: (Applicable to a	M=Reduced Matrix, CS=Covered or Co	Indi	cators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)		1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)		2 cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)		Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Red Parent Material (TF2)
_ Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)		Other (Explain in Remarks)
_ 1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	<ul><li>Depleted Dark Surface (F7)</li><li>Redox Depressions (F8)</li></ul>	3Indi	cators of hydrophytic vegetation and
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Vernal Pools (F9)		etland hydrology must be present,
			지시 않는 그리면서 이렇게 되었다면 그 그 때문에 가는 그리고 하게 되는 것이 없다는 것이 없다면 하다.
Sandy Gleved Matrix (S4)		ur	nless disturbed or problematic.
Sandy Gleyed Matrix (S4)  Restrictive Layer (if present):	· ·	ur	nless disturbed or problematic.
	X	ur	
Restrictive Layer (if present):  Type:  Depth (inches):	iducators observed.		ic Soil Present? Yes No
Restrictive Layer (if present):  Type:  Depth (inches):  Remarks: No hydue 40-11 inches			
Restrictive Layer (if present):  Type:  Depth (inches):  Remarks: No hydra Avil inches			
Restrictive Layer (if present):  Type:  Depth (inches):  Remarks: No hydric 40-0 inches  YDROLOGY  Wetland Hydrology Indicators:	ducators observed.		ic Soil Present? Yes No
Restrictive Layer (if present):  Type: Depth (inches): Remarks:	ed; check all that apply)		Secondary Indicators (2 or more required)
Restrictive Layer (if present):  Type: Depth (inches): Remarks: Why hydrac Avil unit  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one require  Surface Water (A1)	red; check all that apply) Salt Crust (B11)		Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)
Restrictive Layer (if present):  Type: Depth (inches): Remarks: Why hydra Avil inches  YDROLOGY Vetland Hydrology Indicators:  Surface Water (A1) High Water Table (A2)	red; check all that apply)  Salt Crust (B11) Biotic Crust (B12)	Hydr	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Y Sediment Deposits (B2) (Riverine)
Permarks: Why hydrac Avil Indiana (Management):  YDROLOGY  Vetland Hydrology Indicators:  Surface Water (A1)  High Water Table (A2)  Saturation (A3)	red; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)	Hydri	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)
Pestrictive Layer (if present):  Type: Depth (inches):  Pemarks:  Type: Depth (inches):  Pemarks:  Primarks:  Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	red; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1	Hydri	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
Pestrictive Layer (if present):  Type: Depth (inches):  Remarks:  Whythic Avil inches  YDROLOGY  Vetland Hydrology Indicators: rimary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	red; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1  Oxidized Rhizospheres alor	Hydri	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)
Restrictive Layer (if present):  Type: Depth (inches): Remarks: Why hydrac Avid unit  YDROLOGY  Vetland Hydrology Indicators:  Inimary Indicators (minimum of one require _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) (Nonriverine) _ Sediment Deposits (B2) (Nonriverine) _ Drift Deposits (B3) (Nonriverine)	red; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres alor  Presence of Reduced Iron (	Hydri ) ng Living Roots (C3) C4)	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)
Restrictive Layer (if present):  Type: Depth (inches): Remarks: Why hydrac Avid and  YDROLOGY  Vetland Hydrology Indicators:  Inimary Indicators (minimum of one requir 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)	red; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Ti	Hydri ) ng Living Roots (C3) C4)	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)
Type:	red; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres alor  Presence of Reduced Iron ( Recent Iron Reduction in Ti  B7)  Thin Muck Surface (C7)	Hydri ) ng Living Roots (C3) C4)	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 (C  Shallow Aquitard (D3)
Persentictive Layer (if present):  Type: Depth (inches):  Permarks:  Type: Depth (inches):  Permarks:  Type: Depth (inches):  Permarks:  Permar	red; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Ti	Hydri ) ng Living Roots (C3) C4)	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 (C
Restrictive Layer (if present):  Type: Depth (inches):  Remarks: Why hydra Av-I inches  YDROLOGY  Vetland Hydrology Indicators: Inimary Indicators (minimum of one require 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 ( Water-Stained Leaves (B9) ield Observations:	red; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres alor  Presence of Reduced Iron ( Recent Iron Reduction in Ti  B7)  Thin Muck Surface (C7)  Other (Explain in Remarks)	Hydri ng Living Roots (C3) C4) lled Soils (C6)	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 (C  Shallow Aquitard (D3)
Restrictive Layer (if present):  Type: Depth (inches): Remarks:  Whydic Avil in  Remarks:  Vetland Hydrology Indicators: Primary Indicators (minimum of one require 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 ( Water-Stained Leaves (B9) ield Observations: urface Water Present?  Yes	red; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Ti B7) Thin Muck Surface (C7) Other (Explain in Remarks)	Hydri ng Living Roots (C3) C4) lled Soils (C6)	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 (C  Shallow Aquitard (D3)
Restrictive Layer (if present):  Type: Depth (inches):  Remarks: Why hy had for inches):  YDROLOGY  Vetland Hydrology Indicators: 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 ( Water-Stained Leaves (B9)  Tield Observations: Surface Water Present?  Vater Table Present?  Yes  Vater Table Present?	red; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Ti B7) Thin Muck Surface (C7) Other (Explain in Remarks)	Hydring Roots (C3) C4) Illed Soils (C6)	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 (C  Shallow Aquitard (D3)
Restrictive Layer (if present):  Type:	red; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Ti B7) Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Hydring Roots (C3) C4) Illed Soils (C6)  Wetland Hyd	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 (C Shallow Aquitard (D3)  FAC-Neutral Test (D5)
Restrictive Layer (if present):  Type:	red; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron ( Recent Iron Reduction in Ti B7) Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Hydring Roots (C3) C4) Illed Soils (C6)  Wetland Hyd	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 (C Shallow Aquitard (D3)  FAC-Neutral Test (D5)

Investigator(s): 6. School  Landform (hillslope, terrace, etc.): Walky by How  Subregion (LRR): LRR -  Soil Map Unit Name: Steep bulled Land  Are climatic / hydrologic conditions on the site typical for the description of the site typical for the vegetation of the ve	Lat:	Section, To Local relief  a Cocuse ear? Yes disturbed?	wnship, Ra (concave, Simulation No_ MS_Are	Long: Datum:  NWI classification: (If no, explain in Remarks.)  "Normal Circumstances" present? Yes No  eeded, explain any answers in Remarks.)
Hydric Soil Present?  Wetland Hydrology Present?  Yes  Yes	No No No		e Sampleo n a Wetla	A =
Remarks: Vez. debris climped in ch				
Tree Stratum (Plot size:)  1. Salis Caurigafa  2. Quercus agri folia  3.	50			Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata:  (A)
4	70	= Total Cov	er	Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)
1. Nicotiana glauca 2. 3.		<u>yes</u>	UPL	Prevalence Index worksheet:
Herb Stratum (Plot size:)  1. Italian Thirtle (larduus)  2			UPL	FACU species $\begin{array}{cccccccccccccccccccccccccccccccccccc$
3				Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8	2	= Total Cove	er	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2		= Total Cove		Hydrophytic Vegetation Present?  Yes X  No
Remarks: Vege fartion dustur bed due the	debris	olimpe	(From	

	th needed to document the indicator or co	onfirm the absence of indicators.)
Depth Matrix	Redox Features	c <sup>2</sup> Texture Remarks
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup> Lo	
9-12 104R3/Z		Simly lin
	<del></del>	
		<u></u>
	Reduced Matrix, CS=Covered or Coated Sar	nd Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all L	_RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
_ Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Explain in Remarks)
_ 1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)	
_ Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	3
_ Thick Dark Surface (A12)	Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,
_ Sandy Gleyed Matrix (S4)		unless disturbed or problematic.
estrictive Layer (if present):		
Туре:	_	
		Hydric Soil Present? Yes X No
Type: Depth (inches): emarks:		Hydric Soil Present? Yes X No
Type:		Hydric Soil Present? Yes X No
Type: Depth (inches): emarks:  'DROLOGY  'etland Hydrology Indicators:		
Type: Depth (inches): emarks:  'DROLOGY  'etland Hydrology Indicators:	check all that apply)	Secondary Indicators (2 or more required)
Type: Depth (inches): emarks:  TDROLOGY  Tetland Hydrology Indicators:	check all that apply) Salt Crust (B11)	
Type: Depth (inches): emarks:  TDROLOGY  Tetland Hydrology Indicators: cimary Indicators (minimum of one required;		Secondary Indicators (2 or more required)
Type:	Salt Crust (B11)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)
Type:	Salt Crust (B11) Biotic Crust (B12)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)
Type:	<ul><li>Salt Crust (B11)</li><li>Biotic Crust (B12)</li><li>Aquatic Invertebrates (B13)</li></ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
Type:	<ul><li>Salt Crust (B11)</li><li>Biotic Crust (B12)</li><li>Aquatic Invertebrates (B13)</li><li>Hydrogen Sulfide Odor (C1)</li></ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
Type:	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living</li> </ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)
Type:	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils</li> </ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)
Type:	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils</li> <li>Thin Muck Surface (C7)</li> </ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C
Type:	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Soils</li> </ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Seturation Visible on Aerial Imagery (C8)  Shallow Aquitard (D3)
Type:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils 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)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Seturation Visible on Aerial Imagery (C8)  Shallow Aquitard (D3)
Type:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Other (Explain in Remarks)  o Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Seturation Visible on Aerial Imagery (Cand Shallow Aquitard (D3)
Type:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Other (Explain in Remarks)  o Depth (inches): 3'' o Depth (inches): 6''	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3) Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Seturation Visible on Aerial Imagery (Castallow Aquitard (D3)  FAC-Neutral Test (D5)
Type:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Thin Muck Surface (C7) Other (Explain in Remarks)  o Depth (inches): 3'' O Depth (inches): 6''	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Secondary Indicators (2 or more required) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Crayfish Burrows (B10) Secondary Indicators (2 or more required) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Secondary Indicators (2 or more required)

Project/Site: Las Liacs	Cit	y/County: Sun	Dieso County	_ Sampling Date: 3//0///
Applicant/Owner:			V	Sampling Point: 33
Investigator(s): G. Schuel	Se	ction, Township, R	lange:	
Landform (hillslope, terrace, etc.): <u>Ually bol</u> Subregion (LRR): <u>LPL-C</u> Soil Map Unit Name: <u>Steep Gullect Lan</u>	Lat:		Long:	Datum:
		_		
Are climatic / hydrologic conditions on the site typica		/ /		
Are Vegetation, Soil, or Hydrology _				
Are Vegetation, Soil, or Hydrology _			needed, explain any answ	
SUMMARY OF FINDINGS – Attach site	map showing sa	ampling point	locations, transect	s, important features, et
Hydric Soil Present? Yes	No No No	Is the Sample within a Wetla		No
Remarks:				
/EGETATION – Use scientific names of				
Tree Stratum (Plot size:)		ominant Indicator becies? Status	Dominance Test work	
1. During agifolia	15		Number of Dominant S That Are OBL, FACW,	
2. Papulus Formontii (1)		JUS FAC	Total Number of Domin	nant
3		<u> </u>	Species Across All Stra	
4		Total Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size:	1	les UPL	Prevalence Index wor	
1. Safria melefece 2. Do Temisia colepernia		Vo INPL	Total % Cover of:	
3. He feromeles abut Toils		No upe		x 1 =
1. Sdenostema fasciculata	10	No UPL	FACW species	
5			FAC species5	x3=15
Laborator Carry Control	_55 = 7	otal Cover		x 4 =
Terb Stratum (Plot size:) This He (Carduns	sp.) 20 u	JOS UPL	The state of the s	$5 \times 5 = 32.5$ $2 \times 6 = 460$ (B)
•			Prevalence Index	= B/A = 6.2
			Hydrophytic Vegetation	
			Dominance Test is	
			Prevalence Index i	
			Morphological Ada	ptations <sup>1</sup> (Provide supporting
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	s or on a separate sheet)
	_70_=T	otal Cover	Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)
Voody Vine Stratum (Plot size:)			1 Indicators of hydric soi	I and wetland hydrology must
			be present, unless distu	urbed or problematic.
•	=T	otal Cover	Hydrophytic Vegetation	
Bare Ground in Herb Stratum %	Cover of Biotic Crust			s No X
emarks:				
ta -				
ide:				

Depth	cription: (Describe Matrix			lox Features				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10/123/3							
	100							
					و تستند			
		-						
						-		
					-	97700	-	
Type: C=Cc	oncentration, D=Depl	etion, RM=Re	educed Matrix, C	S=Covered	or Coated	Sand Gr	ains. Locati	on: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applica	able to all LR	Rs, unless other	erwise note	ed.)			Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Red					k (A9) (LRR C)
Histic Ep	ipedon (A2)		Stripped M					k (A10) (LRR B)
Black His	stic (A3)		Loamy Mu	cky Mineral	(F1)			Vertic (F18)
Hydrogei	n Sulfide (A4)		Loamy Gle	eyed Matrix	(F2)		Red Pare	nt Material (TF2)
Stratified	Layers (A5) (LRR C	:)	Depleted N	Matrix (F3)			Other (Ex	plain in Remarks)
1 cm Mu	ck (A9) (LRR D)		Redox Dar	k Surface (I	F6)			
Depleted	Below Dark Surface	(A11)	Depleted D	ark Surface	e (F7)			
Thick Da	rk Surface (A12)		Redox Dep	oressions (F	8)		3Indicators of I	hydrophytic vegetation and
	ucky Mineral (S1)		Vernal Poo	ols (F9)			wetland hyd	rology must be present,
	leyed Matrix (S4)						unless distu	rbed or problematic.
	ayer (if present):							
Depth (inc							Hydric Soil Pre	esent? Yes No_X
	so hydric sa						11.7 6.11.5	
112 Z E11 Z E								
YDROLOG								
Wetland Hyd	rology Indicators:							
Primary Indica	ators (minimum of or	e required; c	neck all that app	ly)			Secondar	y Indicators (2 or more required)
Surface V	Water (A1)		Salt Crust	(B11)			Wate	r Marks (B1) (Riverine)
and the second of solid condi-	er Table (A2)		Biotic Cru	st (B12)			Sedir	ment Deposits (B2) (Riverine)
Saturation			Aguatic In		(B13)			Deposits (B3) (Riverine)
		101	Hydrogen					age Patterns (B10)
	arks (B1) (Nonriverin					ing Pool		Season Water Table (C2)
	Deposits (B2) (Non		A STATE OF THE STA	Rhizosphere		ing Rooi		
	osits (B3) ( <b>Nonriveri</b>	ne)	Presence					fish Burrows (C8)
	Soil Cracks (B6)			on Reductio		soils (C6)		ration Visible on Aerial Imagery (C9
Inundatio	n Visible on Aerial In	nagery (B7)	Thin Mucl	Surface (C	27)		1,500,000	ow Aquitard (D3)
Water-Sta	ained Leaves (B9)		Other (Ex	plain in Ren	narks)		FAC-	Neutral Test (D5)
ield Observ	ations:		A -			9		
Surface Water	r Present? Ye	s No	Depth (in	ches):				
Vater Table F			A Depth (in					
						101-41-	and the death are De	No. 1
Saturation Pre		s No	Depth (in	cnes):		vvetia	ina Hyarology Pr	resent? Yes No
includes capi Describe Rec	llary fringe) orded Data (stream g	auge, monito	ring well, aerial	photos, pre	vious inspe	ctions), i	f available:	
	e percentage of the control of the c	A ALEXANDER			R. C. L. S.			
Remarks: U.	pland n. b	1 _ 10	1 7	n 1	1	1	1	
90,	pland Oak	woodle	med 18ta	vel be	fureer	· ta	ro chann	uls.
	E.							

Project/Site: Las Lites			City/County: San	) iaso County	Sampling Date: 3/10/11
Applicant/Owner:					Sampling Point: 34
Investigator(s): 6-Schue	9		Section, Township, Ra	ange:	
Landform (hillslope, terrace, etc.): 1					
Subregion (LRR): LR2-C					
Soil Map Unit Name: Ciereba					
Are climatic / hydrologic conditions on					
Are Vegetation, Soil, o					
Are Vegetation, Soil, o	r Hydrology i	naturally pro	oblematic? (If n	eeded, explain any ansv	vers in Remarks.)
SUMMARY OF FINDINGS - A	Attach site map	showing	sampling point	locations, transec	ts, important features, etc.
Hydrophytic Vegetation Present?	Yes N	lo	Is the Sample	d Arna	
Hydric Soil Present?	Yes N		within a Wetla		No
Wetland Hydrology Present?					
Remarks: Veg dist., area p in understory.	ant of orchard	Wren	rnand safetes e	John John	55 the Enwel grossing
VEGETATION - Use scientifi	c names of plan				
Tree Stratum (Plot size:	)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test wo	
1.				Number of Dominant That Are OBL, FACW	
2.					
3.				Total Number of Dom Species Across All St	
4				Percent of Dominant S That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size:					-
1. Heteroneles ashu				Prevalence Index wo	
2. Maloring Lawri			yes ur		Multiply by: x 1 =
3 4.		_			x 2 =
5.		-	<del></del>		x 3 =
~		20	= Total Cover		
Herb Stratum (Plot size:	)			UPL species Q	x4= 10 x5= 450
1. Bromus diendus		50	yes UPL	Column Totals:9	O (A) 450 (B)
2. Avena barbate		70	- DO UPL	Prevalence Inde	ex = B/A = 5.0
3. Isalian Histle (	(Cardwis sp.)	10	Do UPL	Hydrophytic Vegetat	
4				Dominance Test i	
5				Prevalence Index	
6					aptations <sup>1</sup> (Provide supporting
7					ks or on a separate sheet)
8		20	= Total Cover	Problematic Hydr	ophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:	)		- Total Cover		
1					oil and wetland hydrology must
2				pe present, unless dis	turbed or problematic.
			= Total Cover	Hydrophytic	5.62
% Bare Ground in Herb Stratum	% Cover	of Biotic Cr	rust	Vegetation Present? Y	es No <u>X</u>
Remarks:					<del></del>
With Musical .					

Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup> L	oc <sup>2</sup> Texture	Remarks
0-12 10+E5/3			
			45
			12 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
			·
		and Crains 21 apption	n: PL=Pore Lining, M=Matrix.
Type: C=Concentration, D=Depletion, RM= Hydric Soil Indicators: (Applicable to all I	RRs unless otherwise noted.)		Problematic Hydric Soils <sup>3</sup> :
			(A9) (LRR C)
Histosol (A1) Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)		(A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced V	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Exp	ain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	A CONTRACTOR OF THE PARTY OF TH	
Thick Dark Surface (A12)	Redox Depressions (F8)		drophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)		ology must be present,
Sandy Gleyed Matrix (S4)		unless distur	ped or problematic.
Restrictive Layer (if present):			
Type:	_	11. 11. 0. 11.0	No Ver
Depth (inches):	chicators observed.	Hydric Soil Pres	sent? Yes No X
VDDOLOGV			
Maritia Service Control of the Contr			
Vetland Hydrology Indicators:		Spandan	Indicators /2 or more required)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required;			Indicators (2 or more required)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  Surface Water (A1)	Salt Crust (B11)	Water	Marks (B1) (Riverine)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2)	Salt Crust (B11) Biotic Crust (B12)	Water Sedim	Marks (B1) (Riverine) ent Deposits (B2) (Riverine)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  Surface Water (A1)  High Water Table (A2)  Saturation (A3)	<ul><li>Salt Crust (B11)</li><li>Biotic Crust (B12)</li><li>Aquatic Invertebrates (B13)</li></ul>	Water Sedim Drift D	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	<ul><li>Salt Crust (B11)</li><li>Biotic Crust (B12)</li><li>Aquatic Invertebrates (B13)</li><li>Hydrogen Sulfide Odor (C1)</li></ul>	Water Sedim Drift D Drains	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Livir</li> </ul>	Water Sedim Drift D Draina g Roots (C3) Dry-Se	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Livir</li> <li>Presence of Reduced Iron (C4)</li> </ul>	Water Sedim Drift D Draina g Roots (C3) Crayfi	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required:  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)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Livir</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled So</li> </ul>	Water Sedim Drift D Draina g Roots (C3) Dry-Se Crayfis ils (C6) Satura	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required:  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)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Livir</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled So</li> <li>Thin Muck Surface (C7)</li> </ul>	Water Sedim Drift D Draina g Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  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)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Livir</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled So</li> </ul>	Water Sedim Drift D Draina g Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  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 Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)	Water Sedim Drift D Draina g Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  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)  Surface Water Present?  Yes N	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)	Water Sedim Drift D Draina g Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  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)  Surface Water Present?  Vater Table Present?	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  o Depth (inches): Depth (inches):	Water Sedim Drift D Draina g Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)
Primary Indicators (minimum of one required:  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)  Field Observations: Surface Water Present? Vater Table Present? Ves N Saturation Present? Yes N	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)	Water Sedim Drift D Draina g Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  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)  Tield Observations:  Surface Water Present? Yes Notestand Present?	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  o Depth (inches): Depth (inches): Depth (inches):	Water Sedim Drift D Draina ng Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo FAC-N Wetland Hydrology Pre	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  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)  Field Observations:  Surface Water Present? Yes Noter Table Present? Yes Note Table Present?	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  o Depth (inches): Depth (inches): Depth (inches):	Water Sedim Drift D Draina ng Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo FAC-N Wetland Hydrology Pre	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)
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)  Field Observations: Surface Water Present? Ves N Vater Table Present? Yes N Saturation Present? Yes N Saturation Present? Yes N Sincludes capillary fringe) Describe Recorded Data (stream gauge, mon	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  o Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Water Sedim Drift D Draina ng Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo FAC-N  Wetland Hydrology Presions), if available:	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)
Primary Indicators (minimum of one required; 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)  Field Observations: Surface Water Present? Yes Notestand Pre	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  o Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Water Sedim Drift D Draina ng Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo FAC-N  Wetland Hydrology Presions), if available:	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required;  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)  Tield Observations:  Surface Water Present? Yes Notestand Present?	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  o Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Water Sedim Drift D Draina ng Roots (C3) Dry-Se Crayfis ils (C6) Satura Shallo FAC-N  Wetland Hydrology Presions), if available:	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)

ivestigator(s): G & Che	-		Dealler Taylor D	State: Sampling Date: 1-11-
andform (hillslope, terrace, etc.):	teep &	ully	Local relief (concave	convex, none): <u>Concau</u> Slope (%): <u>5</u> Long: Datum:
ubregion (LRR):	_	Lat:		Long: Datum:
oil Map Unit Name: Fall brook	Sandy	loan		NWI classification:
e climatic / hydrologic conditions on	the site typical	for this time of ye	ar? Yes X No	(If no, explain in Remarks.)
re Vegetation, Soil, or	Hydrology	significantly	disturbed? No Are	"Normal Circumstances" present? Yes X No
				needed, explain any answers in Remarks.)
				locations, transects, important features, e
Hydrophytic Vegetation Present?	Yes	No X	la dia danasia	4.22
Hydric Soil Present?	Yes	No X	Is the Sample	and? Yes NoX
Wetland Hydrology Present?	Yes	No X	within a wetia	and? YesNo/\
Remarks:				
EGETATION – Use scientific	names of	plants.		The state of the s
		Absolute	Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size: Zom			Species? Status	Number of Dominant Species
- None				That Are OBL, FACW, or FAC:(A)
1				Total Number of Dominant
			$\overline{}$	Species Across All Strata: (B)
				Percent of Dominant Species
apling/Shrub Stratum (Plot size:	Zome,	-	= Total Cover	That Are OBL, FACW, or FAC: (A/I
			N UPL	Prevalence Index worksheet:
Nicotiana glaucas Malosma lauvin	a	30	4 UPL	Total % Cover of: Multiply by:
Salvia mellitera			N UPL	OBL species x 1 =
				FACW species x 2 =
				FAC species x 3 =
erb Stratum (Plot size: Zom		50	= Total Cover	FACU species x 4 =
erb Stratum (Plot size: 20 m.) Rhannes sa fiira		40	Y UPL	UPL species 90 x5 = 450
		- 10	- UPL	Column Totals: <u>90</u> (A) <u>450</u> (B
				Prevalence Index = B/A = 5
				Hydrophytic Vegetation Indicators:
				Dominance Test is >50%
				Prevalence Index is ≤3.01
				Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
		40	= Total Cover	Problematic Hydrophytic Vegetation¹ (Explain)
oody Vine Stratum (Plot size:	)			The state of the s
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				be present, unless disturbed or problematic.
		B	= Total Cover	Hydrophytic
Bare Ground in Herb Stratum	020 %	Cover of Biotic Cr	üst	Vegetation Present? Yes No
emarks:				

Depth Matrix Redox (inches) Color (moist) % Color (moist)	Features 7vpe1 1	Loc <sup>2</sup> Text	ture	Remarks
0-12 5/RB/3 wo -		_		
المتعدد والمساور والمساور والمساور				
				<del></del>
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=		Sand Grains.		n: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to all LRRs, unless otherw	vise noted.)			Problematic Hydric Soils <sup>3</sup> :
Histosol (A1) Sandy Redox				(A9) (LRR C)
Histic Epipedon (A2) Stripped Matr				(A10) (LRR B)
Black Histic (A3) Loamy Mucky Hydrogen Sulfide (A4) Loamy Gleye	y Mineral (F1)		Reduced V Red Parent	Material (TF2)
Stratified Layers (A5) (LRR C) Depleted Mat				ain in Remarks)
1 cm Muck (A9) (LRR D) Redox Dark S		_	-5100 4100	Colorador de Colorado
	k Surface (F7)			4 0 4 4 7
Thick Dark Surface (A12) Redox Depre			the property of the same of the same of	drophytic vegetation and
Sandy Mucky Mineral (S1) Vernal Pools Sandy Gleyed Matrix (S4)	(F9)		I whale a till Milaba	plogy must be present, ped or problematic.
Restrictive Layer (if present):			ileas diotari	or problemation
Type:				
Depth (inches):		Undel	- Call Dune	sent? Yes No
		riyan	c Soil Pres	
	bsened.	Hydri	ic Soli Pres	
Remarks: No hydric soil indicators o	bserved.	riyun	ic Soil Pres	
YDROLOGY	bsened.	riyun	c Soli Pres	
YDROLOGY Wetland Hydrology Indicators:		riyun		Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		riyun	Secondary	
YDROLOGY Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  Salt Crust (E	311)	riyun	Secondary Water	Indicators (2 or more required)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Biotic Crust	311)	riyun	Secondary Water Sedim	Indicators (2 or more required) Marks (B1) (Riverine)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Aquatic Inve	311) (B12)	riyun	Secondary Water Sedim	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine)
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1) Salt Crust (B High Water Table (A2) Biotic Crust Saturation (A3) Aquatic Inve Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Oxidized Rh	311) (B12) Intebrates (B13) Ulfide Odor (C1) Izospheres along Livi		Secondary Water Sedim Drift D Draina Dry-Se	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1) Salt Crust (B)  High Water Table (A2) Biotic Crust  Saturation (A3) Aquatic Inve  Water Marks (B1) (Nonriverine) Hydrogen Si  Sediment Deposits (B2) (Nonriverine) Oxidized Rh  Drift Deposits (B3) (Nonriverine) Presence of	311) (B12) ertebrates (B13) ulfide Odor (C1) izospheres along Livi Reduced Iron (C4)	ng Roots (C3)	Secondary Water Sedim Drift D Toraina Dry-Se Crayfis	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1) Salt Crust (E)  High Water Table (A2) Biotic Crust  Saturation (A3) Aquatic Inve  Water Marks (B1) (Nonriverine) Hydrogen Si  Sediment Deposits (B2) (Nonriverine) Oxidized Rh  Drift Deposits (B3) (Nonriverine) Presence of  Surface Soil Cracks (B6) Recent Iron	311) (B12) Intebrates (B13) ulfide Odor (C1) izospheres along Livi Reduced Iron (C4) Reduction in Tilled So	ng Roots (C3)	Secondary Water Sedim Drift D Toraina Dry-Se Crayfis Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9
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) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)  Prinduction Crust Aquatic Inve	311) (B12) Intebrates (B13) Ulfide Odor (C1) Izospheres along Livi Reduced Iron (C4) Reduction in Tilled So	ng Roots (C3)	Secondary Water Sedim Drift D Toraina Dry-Se Crayfis Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1) Salt Crust (B)  High Water Table (A2) Biotic Crust  Saturation (A3) Aquatic Inve  Water Marks (B1) (Nonriverine) Hydrogen Si  Sediment Deposits (B2) (Nonriverine) Oxidized Rh  Drift Deposits (B3) (Nonriverine) Presence of  Surface Soil Cracks (B6) Recent Iron  Inundation Visible on Aerial Imagery (B7) Thin Muck S  Water-Stained Leaves (B9) Other (Explain	311) (B12) Intebrates (B13) Ulfide Odor (C1) Izospheres along Livi Reduced Iron (C4) Reduction in Tilled So	ng Roots (C3)	Secondary Water Sedim Drift D Toraina Dry-Se Crayfis Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9)
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1) Salt Crust (Balter)  High Water Table (A2) Biotic Crust  Saturation (A3) Aquatic Inversed Hydrogen Si  Sediment Deposits (B2) (Nonriverine) Oxidized Rh  Drift Deposits (B3) (Nonriverine) Presence of  Surface Soil Cracks (B6) Recent Iron  Inundation Visible on Aerial Imagery (B7) Thin Muck Si  Water-Stained Leaves (B9)  Selield Observations:	811) (B12) ertebrates (B13) ulfide Odor (C1) izospheres along Livi Reduced Iron (C4) Reduction in Tilled So surface (C7) sin in Remarks)	ng Roots (C3)	Secondary Water Sedim Drift D Toraina Dry-Se Crayfis Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3)
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1) Salt Crust (B)  High Water Table (A2) Biotic Crust  Saturation (A3) Aquatic Inve  Water Marks (B1) (Nonriverine) Hydrogen Si  Sediment Deposits (B2) (Nonriverine) Oxidized Rh  Drift Deposits (B3) (Nonriverine) Presence of  Surface Soil Cracks (B6) Recent Iron  Inundation Visible on Aerial Imagery (B7) Thin Muck Si  Water-Stained Leaves (B9) Other (Explainments)  Surface Water Present? Yes No Depth (incher	811) (B12) ertebrates (B13) ulfide Odor (C1) izospheres along Livi Reduced Iron (C4) Reduction in Tilled So surface (C7) ain in Remarks)	ng Roots (C3)	Secondary Water Sedim Drift D Toraina Dry-Se Crayfis Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3)
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)  Field Observations: Surface Water Present?  Ves No Depth (incher) Vater Table Present?  Ves No Depth (incher)  Ves Depth (incher)	B11) (B12) Intebrates (B13) Intebrates (B13) Intebrates (B13) It is completed along Livi It is complet	ng Roots (C3) bils (C6)	Secondary  Water Sedim Drift D Toraina Dry-Se Crayfis Satura Shallo	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)
Proposition (Basic Sour Linducators)  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1) Salt Crust (Basic Cru	B11) (B12) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C4) Interpr	ng Roots (C3) bils (C6) Wetland Hyd	Secondary Water Sedim Drift D Toraina Dry-Se Crayfis Satura Shallor FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3)
Proposition (Ba) (Nonriverine)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water Table Present?  Water Table Present?  Water Table Present?  Wester Marks (B1) (Nonriverine)  Surface Water (B2) (Nonriverine)  Surface Soil Cracks (B6)  Water Marks (B3) (Nonriverine)  Surface Soil Cracks (B6)  Water Stained Leaves (B9)  Water Stained Leaves (B9)  Water Table Present?  Water Table Present?  Water Table Present?  Yes No Depth (inchesticulars)  Water Stained Present?  Water Table Present?  Yes No Depth (inchesticulars)	B11) (B12) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C4) Interpr	ng Roots (C3) bils (C6) Wetland Hyd	Secondary Water Sedim Drift D Toraina Dry-Se Crayfis Satura Shallor FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)
Proposition (Ba) (Nonriverine)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water Table Present?  Water Table Present?  Water Table Present?  Wester Marks (B1) (Nonriverine)  Surface Water (B2) (Nonriverine)  Surface Soil Cracks (B6)  Water Marks (B3) (Nonriverine)  Surface Soil Cracks (B6)  Water Stained Leaves (B9)  Water Stained Leaves (B9)  Water Table Present?  Water Table Present?  Water Table Present?  Yes No Depth (inchesticulars)  Water Stained Present?  Water Table Present?  Yes No Depth (inchesticulars)	B11) (B12) Intebrates (B13) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C4) Interpr	ng Roots (C3) bils (C6) Wetland Hyd	Secondary Water Sedim Drift D Toraina Dry-Se Crayfis Satura Shallor FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1) Salt Crust (B)  High Water Table (A2) Biotic Crust  Saturation (A3) Aquatic Inve  Water Marks (B1) (Nonriverine) Hydrogen Si  Sediment Deposits (B2) (Nonriverine) Oxidized Rh  Drift Deposits (B3) (Nonriverine) Presence of  Surface Soil Cracks (B6) Recent Iron  Inundation Visible on Aerial Imagery (B7) Thin Muck Si  Water-Stained Leaves (B9) Other (Explained Control of the Control o	B11) (B12) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C4) Interpretation in Tilled Solution in Tilled Solution in Tilled Solution in Remarks) Interpretation (C7) Interpretation in Remarks) Interpretation in Remarks (C7) Interpretation	ng Roots (C3) bils (C6) Wetland Hyd	Secondary Water Sedim Drift D Traina Dry-Se Crayfis Satura Shalloi FAC-N	Indicators (2 or more required)  Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3) leutral Test (D5)  sent? Yes No
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1) Salt Crust (B)  High Water Table (A2) Biotic Crust  Saturation (A3) Aquatic Inve  Water Marks (B1) (Nonriverine) Hydrogen Si  Sediment Deposits (B2) (Nonriverine) Oxidized Rh  Drift Deposits (B3) (Nonriverine) Presence of  Surface Soil Cracks (B6) Recent Iron  Inundation Visible on Aerial Imagery (B7) Thin Muck Si  Water-Stained Leaves (B9) Other (Explained Control of the Control o	B11) (B12) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C4) Interpretation in Tilled Solution in Tilled Solution in Tilled Solution in Remarks) Interpretation (C7) Interpretation in Remarks) Interpretation in Remarks (C7) Interpretation	ng Roots (C3) bils (C6) Wetland Hyd	Secondary Water Sedim Drift D Traina Dry-Se Crayfis Satura Shalloi FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3) leutral Test (D5)
Process  YDROLOGY  Vetland 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)  Thin Muck Sield Observations:  Surface Water Present?  Ves No Depth (inchest on the control of the control	B11) (B12) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C4) Interpretation in Tilled Solution in Tilled Solution in Tilled Solution in Remarks) Interpretation (C7) Interpretation in Remarks) Interpretation in Remarks (C7) Interpretation	ng Roots (C3) bils (C6) Wetland Hyd	Secondary Water Sedim Drift D Traina Dry-Se Crayfis Satura Shalloi FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3) leutral Test (D5)
POROLOGY  Vetland Hydrology Indicators:  Irimary 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)  Ield Observations:  Urface Water Present?  Ves  No  Depth (inchect actions are all properties of the present of the	B11) (B12) Intebrates (B13) Intebrates (B13) Intebrates (B13) Interpretation (C1) Interpretation (C4) Interpretation in Tilled Solution in Tilled Solution in Tilled Solution in Remarks) Interpretation (C7) Interpretation in Remarks) Interpretation in Remarks (C7) Interpretation	ng Roots (C3) bils (C6) Wetland Hyd	Secondary Water Sedim Drift D Traina Dry-Se Crayfis Satura Shalloi FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3) leutral Test (D5)

Project/Site: Lilac Kills	Kanch		City/Cou	nty: <u>Sand</u>	) ceges / Sam Dug	Sampling	Date:	-11 -1
Applicant/Owner: Accretive					State: CA	_ Sampling	Point:	360
Investigator(s): 6. Sched								
Landform (hillslope, terrace, etc.): <u>Uo</u>	Mey Do.	Hom	Local re	lief (concave,	convex, none): Coy	care	_ Slope (%	6):0-
Subregion (LRR): LRR-C	2	Lat:			Long:		_ Datum:	
Soil Map Unit Name: Fallbrook	Sanda	loam			NWI class	ification:	301010	
Are climatic / hydrologic conditions on the		_						
Are Vegetation, Soil, or I					"Normal Circumstances			No
					eeded, explain any ans			100
Are Vegetation, Soil, or I SUMMARY OF FINDINGS - At				A Comment				oc of
			Sampi	ing point	ocations, transec	ts, import	ant leatur	65, 60
Hydrophytic Vegetation Present?		No		the Sample				
Hydric Soil Present?	Yes 4	No	w	ithin a Wetla	nd? Yes	× No_		
Wetland Hydrology Present? Remarks:	Yes Y	No		COLUMN TO A				
/EGETATION – Use scientific	names of pl	ants.						
- a	-	Absolute		nt Indicator	Dominance Test wo	rksheet:		
Tree Stratum (Plot size: 10 m2		% Cover 40	Species	Status FACU	Number of Dominant		\$3	741
1. Salie lawigato			N	UPL	That Are OBL, FACW	, or FAC:	-	_ (A)
2. Quesuls agrifolia 3. Salix lasielepis		70	N	FACW	Total Number of Dom		3	(D)
3. Saux lastelepis			_/-	IRCU	Species Across All St	rata: _		_ (B)
		70	= Total C	Cover	Percent of Dominant That Are OBL, FACW		10020	2 (A/B)
Sapling/Shrub Stratum (Plot size:  1 N ove	)				Prevalence Index we	orkshoot.	***	The second
2					Total % Cover of		Multiply by:	
3					OBL species			
4					FACW species			
5,					FAC species			
			= Total C	Cover	FACU species			
Herb Stratum (Plot size: 10m2			,	6	UPL species		-	
1. Cypevus esculente			7	FACW	Column Totals:	(A)		(B)
2. Ronppe naustation	-aguatica	2_2	_7	OBL	Describeras India	- D/A -		
3					Prevalence Inde			
				-	Dominance Test		3.	
5					Prevalence Index			
5,					Morphological Ac		rovide suppo	orting
7,					data in Remar	ks or on a se	parate sheet	)
		-4	= Total C	Cover	Problematic Hydr	ophytic Vege	tation¹ (Expla	ain)
Woody Vine Stratum (Plot size:			- Total C	over				
1.				استنداد	<sup>1</sup> Indicators of hydric s			must
2,					be present, unless dis	turbed or pro	blematic.	
			= Total C	over	Hydrophytic			
% Bare Ground in Herb Stratum/4	% Co	ver of Biotic Cr	ust -		Vegetation Present? Y	es_X	No	
Remarks:			-71		1 4 9 2 2 1/22		(0,0,	
William No.								

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	( )	•	

Depth	Matrix			x Feature			n the absence of i	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc2	Texture	Remarks
6-4	10423/2		104R 3/1	5	Rm	m		
5-14	104R3/2	95 6	ley 1 5/W	5	EM	<u></u>		
ydric Soil  Histosol  Histic El Black Hi	pipedon (A2) istic (A3)	pletion, RM=Re cable to all LRI	Rs, unless other Sandy Redo Stripped Ma Loamy Muc	rwise no ox (S5) atrix (S6) ky Minera	al (F1)	d Sand Gr	Indicators for 1 cm Muck 2 cm Muck Reduced V	The first first and the second file and the second
Stratified 1 cm Mu Depleted Thick Da Sandy M	en Sulfide (A4) d Layers (A5) (LRR uck (A9) (LRR D) d Below Dark Surfac ark Surface (A12) Mucky Mineral (S1)		Loamy Gley Depleted M: Redox Dark Depleted Da Redox Depr Vernal Pool	atrix (F3) Surface ark Surface essions (	(F6) ce (F7)		Other (Exp  Indicators of hywetland hydr	t Material (TF2)  Iain in Remarks)  /drophytic vegetation and  ology must be present,
	Sleyed Matrix (S4)  Layer (if present):						unless distur	bed or problematic.
Type: Depth (in	e to take we take		-				Hydric Sail Broa	sent? Yes X No
YDROLO	GY							
	drology Indicators:						4	
brimant India	cators (minimum of c	one required; ch	eck all that apply Salt Crust	/)			Secondary	Indicators (2 or more required)
Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundatio Water-Si	ater Table (A2) on (A3) larks (B1) (Nonriver at Deposits (B2) (No cosits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial tained Leaves (B9)	nriverine) rine)	Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Other (Exp	t (B12) vertebrate Sulfide O hizosphe of Reduce Reducti Surface	dor (C1) res along L ed Iron (C4) on in Tilled (C7)		∑   Sedim	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) sh Burrows (C8)
C Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundatio Water-Si ield Observ urface Water	ater Table (A2) on (A3) larks (B1) (Nonriver at Deposits (B2) (No cosits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial tained Leaves (B9) vations: er Present? Y	Imagery (B7)  Yes   You No You No	Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iron Thin Muck Other (Exp Depth (inc	t (B12) rertebrate Sulfide O hizosphe of Reducti Surface lain in Re ches):	dor (C1) bres along L and Iron (C4) on in Tilled (C7) amarks)	Soils (C6	Y Sedim Drift D Draina ts (C3) Dry-Si Crayfi Satura Shallo FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ege Patterns (B10) eason Water Table (C2) sh Burrows (C8) etion Visible on Aerial Imagery (C9) w Aquitard (D3) Neutral Test (D5)
Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundatio Water-Si Field Observ Surface Water Water Table Saturation Pr Includes cap	ater Table (A2) on (A3) larks (B1) (Nonriver of Deposits (B2) (No cosits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial tained Leaves (B9) vations: er Present? Present? Y	Imagery (B7)  Yes   You No Yes   No Yes   No Yes   No	Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iron Thin Muck Other (Exp Depth (inc	t (B12) rertebrate Sulfide O hizosphe of Reducti Surface lain in Re ches): ches);	dor (C1) bres along L bres along L cod Iron (C4) on in Tilled (C7) bresarks)	Soils (C6	Y Sedim Drift D Draina ts (C3) Dry-Si Crayfi ) Satura Shallo FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ege Patterns (B10) eason Water Table (C2) sh Burrows (C8) etion Visible on Aerial Imagery (C9) w Aquitard (D3) Neutral Test (D5)

Project/Site: Lilac of Cla	s Ranch		City/County: <u>San</u>	Diego / SD Sampling Date: 1-11-12				
Applicant/Owner: Accretive	Group		State: CA Sampling Point: 37 3					
Investigator(s): 6-5cheel			Section, Township, Range:					
Landform (hillslope, terrace, etc.):	lope		Local relief (concave	e, convex, none): Covicave Slope (%): 5-				
Subregion (LRR): LRQ-C		Lat:	Carlo Stanford	Long: Datum:				
	1 1		m	NWI classification:				
Are climatic / hydrologic conditions on t		- Na. J						
				e "Normal Circumstances" present? YesX No				
				needed, explain any answers in Remarks.)				
				locations, transects, important features, etc				
Hydrophytic Vegetation Present?	Yes	No 4						
Hydric Soil Present?	Yes	No 7	Is the Sample	The state of the s				
Hydric Soil Present? Wetland Hydrology Present? Remarks: 41, 4	Yes	No Y	within a Wetis	and? Yes No				
/EGETATION – Use scientific	names of p	plants.	Dominant Indicator	Dominance Test worksheet:				
Tree Stratum (Plot size: 10 m = 1. Avacodo		% Cover	Species? Status	Number of Dominant Species				
2				Total Number of Dominant Species Across All Strata:  (B)				
4.								
Sapling/Shrub Stratum (Plot size:	)	30	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:  (A/B)				
1. none				Prevalence Index worksheet:				
2				Total % Cover of: Multiply by:				
3				OBL species x 1 =				
4				FACW species x 2 =				
5,			- Tatal Causa	FAC species x 3 = FACU species x 4 =				
Herb Stratum (Plot size: 10 an2	)		= Total Cover	UPL species 80 x5= 400				
1. Brassica sp.		5	N UPL	Column Totals: 80 (A) 400 (B)				
2. Malva parvi Flora		5_	N UPL					
3. Anagalis avvensis		15%	Y UPL	Prevalence Index = B/A =5				
4. Crodum cicutarie	m	Z58	Y UPL	Hydrophytic Vegetation Indicators:				
5				Dominance Test is >50%				
6				Prevalence Index is ≤3.0¹				
7,				Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)				
8				Problematic Hydrophytic Vegetation (Explain)				
Woody Vine Stratum (Plot size:	Š.	50	= Total Cover					
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must				
2.				be present, unless disturbed or problematic.				
	9 A. Z		= Total Cover	Hydrophytic Vegetation				
% Bare Ground in Herb Stratum	% C	over of Biotic Cr	Jst	Present? Yes No				
Remarks:								

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Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type¹ L	oc <sup>2</sup> Texture	Remarks
0-18 104R3/3 100			
	<del> </del>		
Type: C=Concentration D=Depletion R	RM=Reduced Matrix, CS=Covered or Coated S	and Grains. <sup>2</sup> Loca	tion: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to			or Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)	1 cm Mu	ck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Mu	ck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)		l Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		ent Material (TF2)
_ Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (E	xplain in Remarks)
_ 1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	3Indicators a	hydrophytic vegetation and
Thick Dark Surface (A12)	Redox Depressions (F8) Vernal Pools (F9)		drology must be present,
<ul><li>Sandy Mucky Mineral (S1)</li><li>Sandy Gleyed Matrix (S4)</li></ul>	Vernal Fools (13)		urbed or problematic.
estrictive Layer (if present):			
Type:			
Depth (inches):		Hydric Soil P	resent? Yes No X
demarks: No hydric Soil inc			
VDDQLQQV			
/DROLOGY			
Vetland Hydrology Indicators:	and about all that applied	na land	10.01
rimary Indicators (minimum of one requi			
			ary Indicators (2 or more required)
Surface Water (A1)	Salt Crust (B11)	Wa	ter Marks (B1) (Riverine)
Surface Water (A1) High Water Table (A2)	Salt Crust (B11) Biotic Crust (B12)	Wa Sec	ter Marks (B1) ( <b>Riverine)</b> liment Deposits (B2) ( <b>Riverine</b> )
High Water Table (A2) Saturation (A3)	<ul><li>Salt Crust (B11)</li><li>Biotic Crust (B12)</li><li>Aquatic Invertebrates (B13)</li></ul>	Wa Sec Drif	ter Marks (B1) ( <b>Riverine</b> ) liment Deposits (B2) ( <b>Riverine</b> ) t Deposits (B3) ( <b>Riverine</b> )
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> </ul>	Wa Sec Drif Dra	ter Marks (B1) ( <b>Riverine</b> ) liment Deposits (B2) ( <b>Riverine</b> ) t Deposits (B3) ( <b>Riverine</b> ) inage Patterns (B10)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Livir</li> </ul>	Wa Sec Drif Dra ng Roots (C3) Dry	ter Marks (B1) ( <b>Riverine</b> ) liment Deposits (B2) ( <b>Riverine</b> ) t Deposits (B3) ( <b>Riverine</b> ) inage Patterns (B10) -Season Water Table (C2)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4)	Wa Sec Drif Dra ng Roots (C3) Dry Cra	ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Pattems (B10) -Season Water Table (C2) yfish Burrows (C8)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So	Wa Sec Drif Dra ng Roots (C3) Dry Cra sils (C6) Sat	ter Marks (B1) ( <b>Riverine</b> ) liment Deposits (B2) ( <b>Riverine</b> ) t Deposits (B3) ( <b>Riverine</b> ) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9
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	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So (B7) Thin Muck Surface (C7)	Wa Sec Drif Dra Cra Cra Sat Sha	ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9
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 Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So	Wa Sec Drif Dra Cra Cra Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) liment Deposits (B2) ( <b>Riverine</b> ) t Deposits (B3) ( <b>Riverine</b> ) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9
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 (Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) e) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)	Wa Sec Drif Dra Cra Cra Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) liment Deposits (B2) ( <b>Riverine</b> ) it Deposits (B3) ( <b>Riverine</b> ) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9
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 Water-Stained Leaves (B9)  field Observations: Surface Water Present?  Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)	Wa Sec Drif Dra Cra Cra Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) liment Deposits (B2) ( <b>Riverine</b> ) it Deposits (B3) ( <b>Riverine</b> ) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9
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 (Water-Stained Leaves (B9) Sield Observations: Surface Water Present? Vater Table Present? Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Wa Sec Drif Dra Cra Sat Sha FAC	ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 illow Aquitard (D3) C-Neutral Test (D5)
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 (Water-Stained Leaves (B9) ield Observations: surface Water Present? Vater Table Present? Vater Table Present? Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)	Wa Sec Drif Dra Cra Sat Sha FAC	ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9
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 (Water-Stained Leaves (B9)  Ield Observations: urface Water Present? Vater Table Present? Vater Table Present? Ves aturation Present? Ves Includes capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Wa Sec Drif Dra Cra Sat Sha FAC Wetland Hydrology I	ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 illow Aquitard (D3) C-Neutral Test (D5)
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 Water-Stained Leaves (B9) Field Observations: Surface Water Present? Vater Table Present? Vater Table Present? Ves Saturation Present? Ves Sincludes capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Wa Sec Drif Dra Cra Sat Sha FAC Wetland Hydrology I	ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 illow Aquitard (D3) C-Neutral Test (D5)
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 (Water-Stained Leaves (B9)  Iteld Observations: Surface Water Present? Vater Table Present?	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches):	Wa Sec Drif Dra Cra Sat Sha FAC Wetland Hydrology I	ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 illow Aquitard (D3) C-Neutral Test (D5)
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 (Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Vater Table Present? Vater Table Present? Vater Table Present? Ves Saturation Present? Ves Secribe Recorded Data (stream gauge, 19)  Sescribe Recorded Data (stream gauge, 19)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches):	Wa Sec Drif Dra Cra Sat Sha FAC Wetland Hydrology I	ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 illow Aquitard (D3) C-Neutral Test (D5)
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 (Water-Stained Leaves (B9)) Iteld Observations: Urface Water Present? Ves Vater Table Present? Ves Ves Vater Table Present? Ves	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches):	Wa Sec Drif Dra Cra Sat Sha FAC Wetland Hydrology I	ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 illow Aquitard (D3) C-Neutral Test (D5)
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 (Water-Stained Leaves (B9)) Iteld Observations: Urface Water Present? Ves Vater Table Present? Ves Ves Vater Table Present? Ves	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches):	Wa Sec Drif Dra Cra Sat Sha FAC Wetland Hydrology I	ter Marks (B1) (Riverine) liment Deposits (B2) (Riverine) t Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9 illow Aquitard (D3) C-Neutral Test (D5)

			State: CA Sampling Point: 38 @						
Landform (hillslope, terrace, etc.): Sully				Section, Township, Range:					
Subregion (LRR): LRR-C									
Soil Map Unit Name: Fallb500									
Are climatic / hydrologic conditions on									
Are Vegetation, Soil, or	r Hydrology	significantly	disturbed	d? yes Are	"Normal Circumst	ances" present?	Yes X	No	
are Vegetation, Soil, or	r Hydrology	naturally pro	oblematic	? No (Ifn	eeded, explain an	y answers in Ren	narks.)		
SUMMARY OF FINDINGS - A	Attach site i	nap showing	sampl	ling point l	ocations, trar	sects, impo	rtant featur	es, etc	
Hydrophytic Vegetation Present?	Yes	No 4	1	the Complet	d Anna				
Hydric Soil Present?		_ No_+_	1	the Sample		sNo	X		
Wetland Hydrology Present?			W	itiiii a vvetia	nur re	s No			
/EGETATION – Use scientific	c names of		Damina	unt Indicator	Dominance Te	ot waska boot:			
Tree Stratum (Plot size:	)	Absolute % Cover		nt Indicator Status	Number of Dom				
1. None					That Are OBL,		- 1	_ (A)	
2.					Total Number o	f Dominant	-7		
3					Species Across		3	(B)	
4,					Percent of Dom	inant Species	- 0		
Sapling/Shrub Stratum (Plot size:	10m2		= Total (	Cover	That Are OBL, F		33 %	_ (A/B)	
1. Nicotiana glave	a	Z	Y	UPL	Prevalence Ind	ex worksheet:			
2. Tamarix ramossissi	wie	2	Y	FAC	Total % Co	ver of:	Multiply by:		
3					OBL species	×	1 =	_	
4					The second secon	×			
5			*******		and the second second second	x		-	
Herb Stratum (Plot size: 10 m			= Total C	Cover	FACU species UPL species	- az ×	1.16	-	
1. Rhapanus sativas		10	N	UR	Column Totals:			(B)	
2. Brassica nigra		80	Y	upl	Column Totals.		1 (5-1) #/*	(0)	
3.					Prevalence	e Index = B/A =	4.8	_	
4					Hydrophytic Ve		tors:		
5					Dominance				
6.						Index is ≤3.01			
7		_			Morphologic	cal Adaptations <sup>1</sup> Remarks or on a s	(Provide suppo separate sheet	orting :)	
В		90	- T-1-1 C	Davier.		Hydrophytic Veg			
Woody Vine Stratum (Plot size:		-10	= Total C	20VEL					
1					<sup>1</sup> Indicators of hy			must	
2,					be present, unle	ss disturbed or p	robiematic.		
		_	= Total C	Cover	Hydrophytic Vegetation				
% Bare Ground in Herb Stratum4	0 %	Cover of Biotic Cr	ust		Present?	Yes	No X		
Remarks:									
TOTTIGHTO.									

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Profile Des	cription: (Describe	to the depth	needed to docu	ment the	Indicator o	or confirm	the absence of indicators.)				
Depth	Matrix			x Feature		12	Texture Remarks				
(inches)	Color (moist)	1000	Color (moist)			_Loc²					
0-12	104R3/Z	1000					Sandyloan				
12-18	7.5 YR3/3	1002					Sandy				
	1										
		-			_						
				-	_						
-						10-10	21				
Type: C=C	oncentration, D=Depl Indicators: (Applica	etion, RM=R	educed Matrix, CS	=Covered	or Coated	a Sand Gra	ains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :				
		ible to all Er	Sandy Red		Ju.,		1 cm Muck (A9) (LRR C)				
Histosol	oipedon (A2)		Stripped Ma				2 cm Muck (A10) (LRR B)				
The second secon	istic (A3)		Loamy Muc	A Committee of the Comm	(F1)		Reduced Vertic (F18)				
The second secon	en Sulfide (A4)		Loamy Gley				Red Parent Material (TF2)				
	d Layers (A5) (LRR C	)	Depleted M				Other (Explain in Remarks)				
1 cm Mu	ick (A9) (LRR D)		Redox Dark	Surface (	F6)						
The same of the same of the same of	d Below Dark Surface	(A11)	Depleted Da				A mark that was recommended				
	ark Surface (A12)		Redox Depr		-8)		<sup>3</sup> Indicators of hydrophytic vegetation and				
	Mucky Mineral (S1)		Vernal Pool	s (F9)			wetland hydrology must be present, unless disturbed or problematic.				
The second second second second	Bleyed Matrix (S4) Layer (if present):						unless disturbed or problematic.				
Type:	Layer (ii present).										
Depth (inc	ahae\t		-				Hydric Soil Present? Yes No				
the same of the same of the same	To hydrac sai	2									
IVEROLO	CV										
IYDROLO											
T	drology Indicators: cators (minimum of or	o roquirod: s	shook all that anni-	ń.			Secondary indicators (2 or more required)				
- 1111111111111111111111111111111111111		ie required, c					Water Marks (B1) (Riverine)				
	Water (A1)		Salt Crust Biotic Crust								
	ter Table (A2)		Aquatic Inv		(B13)		Drift Deposits (B3) (Riverine)				
Saturatio	arks (B1) (Nonriverir	10)	Hydrogen :				Drainage Patterns (B10)				
The same of a second	nt Deposits (B2) (Non					iving Root	ts (C3) Dry-Season Water Table (C2)				
F-10 (61 (101 ) (11 )	oosits (B3) (Nonriveri		Presence				Crayfish Burrows (C8)				
	Soil Cracks (B6)	,,,,	Recent Iron								
	on Visible on Aerial In	nagery (B7)	Thin Muck				Shallow Aquitard (D3)				
	tained Leaves (B9)	lagery (D/)	Other (Exp				FAC-Neutral Test (D5)				
Field Observ											
Surface Wate		s No	Depth (inc	hes):							
Water Table			Depth (inc								
Saturation Pr			Depth (inc				nd Hydrology Present? Yes No _X				
(includes cap		sNO	Z Depti (inc			- 1700,0					
Describe Red	corded Data (stream g	gauge, monit	oring well, aerial p	hotos, pre	evious insp	ections), it	f available:				
		,		- A							
Remarks:	Ephemeral o	Strains	e in orch	and;	tr-bu	Leon 4	o main drainago.				
	a Hannahan	-		U.	1	, ,					
	OHWW 215	54- Wid	e non-we	-time	was						
			Stream	bed							

Project/Site: Lilar (Lils Ranch		City/Cou	intv: Sam	Digo/SD	Sampling Date: /	-11-12
				State: CA		
Investigator(s): 6. Scheid						
Landform (hillslope, terrace, etc.): Valley by Hom		Least se	lief (especie	ange.	Sind Class /	10/1.5-10
Subregion (LRR): LPQ-C						
Soil Map Unit Name: Fallbrook Sandy						
Are climatic / hydrologic conditions on the site typical for the	nis time of ye	ar? Yes	_ X No_	(If no, explain in Re	marks.)	
Are Vegetation, Soil, or Hydrology	significantly	disturbed	d?Nd Are	"Normal Circumstances" pr	esent? Yes 🞾	No
Are Vegetation, Soil, or Hydrology			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
SUMMARY OF FINDINGS - Attach site map	showing	samp	ling point l	ocations, transects,	important featu	ıres, etc.
Hydrophytic Vegetation Present? Yes	No		Andrews	. 146		
	No		the Sampled		No	
Wetland Hydrology Present? Yes	No	W	ithin a Wetlar	nar res		
Remarks:		-				
		-				
VEGETATION – Use scientific names of plan	nts.					
Tree Stratum (Plot size: 10w2)	Absolute		ant Indicator	Dominance Test works	heet:	
	% Cover			Number of Dominant Spe		703
1. Salix lasielepis 2. Salix lawigata		- X)	FACE	That Are OBL, FACW, or	FAC:	(A)
2. Saux receogara			_ 1000	Total Number of Dominar		(0)
J.				Species Across All Strata	1;	(B)
*-	15	= Total	Cover	Percent of Dominant Spe		(4.00)
Sapling/Shrub Stratum (Plot size:)	-63	- Total	COVE	That Are OBL, FACW, or	FAC: 700	(A/B)
1. none		-		Prevalence Index works	sheet:	
2.				Total % Cover of:	Multiply by:	
3				OBL species	x 1 =	
4,				FACW species	x 2 =	_
5	_			FAC species		
Herb Stratum (Plot size: 10 m2)		= Total (	Cover	FACU species		
1. Rossipa nausturtim - aguadirum	100	V	OBL	The state of the s	x 5 =	
	- 15	42	FACU	Column Totals:	(A)	(B)
2. Cynuden dartylon 3. Rumet crispus	z	N	FACW	Prevalence Index =	= B/A =	
1. Rumly Crispus	2		_ 1,000	Hydrophytic Vegetation		
5				L Dominance Test is >		
6.				Prevalence Index is s		
7.				Morphological Adapta	ations <sup>1</sup> (Provide supr	porting
8				data in Remarks of	or on a separate shee	et)
o	22	= Total (	Cover	Problematic Hydroph	ytic Vegetation¹ (Exp	olain)
Woody Vine Stratum (Plot size:)		, Total s	-0.0	Later Wall Control of the		
1				Indicators of hydric soil a		y must
2.		-		be present, unless disturb	red of problematic.	
		= Total C	Cover	Hydrophytic		
% Bare Ground in Herb Stratum % Cove	r of Biotic Cr	rust <		Vegetation Present? Yes	X No	
Remarks:				177		-
1 10110011100						

_	-	
	1 1	
-	$\sim$	

Depth Matrix	Redox Features	2.0.00
(inches) Color (moist) %	Color (moist) % Type1	Loc <sup>2</sup> Texture Remarks
0-18 Way 6-ley 5/N	100	- Clayloun
0 0		
		<del></del>
Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS=Covered or Coated	Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
✓ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Stratified Layers (A5) (LRR C)	✓ Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)	
<ul> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> </ul>	Depleted Dark Surface (F7) Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	_ ,	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soil Present? Yes V No
Depth (inches):Remarks:		Hydric Soil Present? Yes <u>V</u> No
Remarks:		Hydric Soil Present? Yes <u>V</u> No
YDROLOGY		Hydric Soil Present? Yes <u>V</u> No
YDROLOGY Vetland Hydrology Indicators:		
Remarks:  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required		Secondary Indicators (2 or more required)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required   ✓ Surface Water (A1)	Salt Crust (B11)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)	Salt Crust (B11) Biotic Crust (B12)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)	<ul><li>Salt Crust (B11)</li><li>Biotic Crust (B12)</li><li>Aquatic Invertebrates (B13)</li></ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine) XDrift Deposits (B3) (Riverine)
YDROLOGY  Vetland Hydrology Indicators: Primary Indicators (minimum of one required  ✓ Surface Water (A1)  ✓ High Water Table (A2)  ✓ Saturation (A3)  Water Marks (B1) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> </ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)XDrift Deposits (B3) (Riverine) Drainage Patterns (B10)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Liv</li> </ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  XDrift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ring Roots (C3) Dry-Season Water Table (C2)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Liv</li> <li>Presence of Reduced Iron (C4)</li> </ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Soliment Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  ∑ 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)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Shrift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Indicators (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)
YDROLOGY  Vetland Hydrology Indicators:  Inimary Indicators (minimum of one required  Y Surface Water (A1)  Y High Water Table (A2)  Y Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  ring Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
YDROLOGY  Vetland Hydrology Indicators:  Inimary Indicators (minimum of one required  Y Surface Water (A1)  Y High Water Table (A2)  Y 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 Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Shrift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Indicators (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)
YDROLOGY  Vetland Hydrology Indicators:  Vrimary Indicators (minimum of one required  Yeligh Water Table (A2)  Yeligh Water Table (A2)  Yeligh Water Table (A2)  Yeligh Water Table (B2)  Yeligh Water Table (B3)  Yeligh 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 Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 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)  ring Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required    Y 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)  Field Observations:  Surface Water Present?	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 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)  ring Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  ✓ 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)  Field Observations:  Furface Water Present?  Ves ✓ Nonriverine	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Torift Deposits (B3) (Riverine)  Drainage Patterns (B10)  pry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  ✓ 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)  Veter Water Present?  Ves ✓ Nonriverine	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S 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)  ring Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  ✓ 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)  ileid Observations:  surface Water Present?  Ves ✓ Norther Nessent?	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Print 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)  Wetland Hydrology Present? Yes No
YDROLOGY  Vetland Hydrology Indicators:  Irimary Indicators (minimum of one required  X Surface Water (A1)  Y High Water Table (A2)  Y 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)  ield Observations:  urface Water Present?  Ves ✓ Naturation Present?	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Print 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)  Wetland Hydrology Present? Yes No
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required of the content of the cont	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Print 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)  Wetland Hydrology Present? Yes No
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  ✓ 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)  Field Observations:  Surface Water Present?  Ves ✓ Nonriverine	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Print 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)  Wetland Hydrology Present? Yes No
YDROLOGY  Vetland Hydrology Indicators:  Irimary Indicators (minimum of one required  X Surface Water (A1)  Y High Water Table (A2)  Y 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)  ield Observations:  urface Water Present?  Ves ✓ Naturation Present?	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Print 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)  Wetland Hydrology Present? Yes No

Project/Site: Lilac Wills Ranch	City/0	County: Jan	NED /50	Sampling D	ate: /-//	-1Z_			
Applicant/Owner: Accretive Group		State: CA Sampling Point: 40 ©							
Investigator(s): 6. Scheid		Section, Township, Range:							
Landform (hillslope, terrace, etc.): vally bottle Subregion (LRR): LRZ-C	Lat:	al relief (concave,	convex, none):		Datum:	5-1			
Soil Map Unit Name: Fallbrook Sandy	loam		NWI class	ification:					
Are climatic / hydrologic conditions on the site typical for thi	s time of year?	res X No_	(If no, explain in	Remarks.)					
Are Vegetation, Soil, or Hydrology s	significantly distu	rbed? No Are	"Normal Circumstances	" present? Yes	× N	o			
Are Vegetation, Soil, or Hydrology r	aturally problem	atic? No (If ne	eded, explain any ansv	wers in Remarks	s.)				
SUMMARY OF FINDINGS – Attach site map	showing san	npling point l	ocations, transec	ts, importar	nt feature	s, etc.			
	o o	Is the Sampled within a Wetlan		∠_ No					
VEGETATION – Use scientific names of plan  Tree Stratum (Plot size: 10 m 2 )  1. Salix lexiples se.	Absolute Don % Cover Spe	ninant Indicator cies? Status FACU UPL	Dominance Test wo Number of Dominant That Are OBL, FACW	Species /, or FAC:	ı	(A)			
3. Washingtonia vobusta	5 N	FAC	Total Number of Dom Species Across All St		2	(B)			
Sapling/Shrub Stratum (Plot size:)	95 = To	tal Cover	Percent of Dominant That Are OBL, FACW		50	(A/B)			
1. None			Prevalence Index we	orksheet:					
2.			Total % Cover of	: <u>Mı</u>	ultiply by:	_			
3			OBL species						
4			FACW species						
5			FAC species			7			
Herb Stratum (Plot size:)	= To	tal Cover	FACU species		150	-			
1. Nore			UPL species 36 Column Totals: 9		285	(D)			
2.			Column Totals:9	(A)		_ (B)			
3.			Prevalence Inde	ex = B/A =	3				
4.			Hydrophytic Vegeta	tion Indicators	:				
5			Dominance Test						
6			X Prevalence Index						
7			Morphological Ac	laptations' (Prov ks or on a sepa	vide support	ing			
8			Problematic Hydr			n)			
Woody Vine Stratum (Plot size:)  1	= Tot	al Cover	<sup>1</sup> Indicators of hydric s be present, unless dis	oil and wetland	hydrology m				
2.	= Tot	al Cover	Hydrophytic Vegetation						
% Bare Ground in Herb Stratum % Cover	of Biotic Crust _	_	Present? Y	es X No					
Remarks:									

0	1	t	
J	v	,	_

Depth	Matrix			ox Feature		1 - 2	Total Committee
(inches)	Color (moist)	<u>%</u> _	Color (moist)	%	Type¹ _	Loc² _	Texture Remarks
0-18	184R3/2	95	54R6/8	_5_	_Rm_	m_	Coany sand
						000	
				-			
				2 2 2 2 2 2			
	oncentration, D=Dep					Sand Grail	ins. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
	Indicators: (Applic	able to all LR			eu.)		- "얼마리아를 다른가 하다면 모양을 다 만든다면 하는 사람들이 얼마나 하는데 얼마나 없는데 그렇다면 하는데 그 없는데 그렇다면 하는데 없다면 하는데 없다
_ Histosol	Control of the Contro		Sandy Red				1 cm Muck (A9) (LRR C)
	oipedon (A2)		Stripped M	Control of the second second	(E4)		2 cm Muck (A10) (LRR B) Reduced Vertic (F18)
Black His  K Hydroge	stic (A3) n Sulfide (A4)		Loamy Muc				Red Parent Material (TF2)
	n Sulfide (A4) I Layers (A5) (LRR (	7)	Depleted M		(12)		Other (Explain in Remarks)
	ck (A9) (LRR D)	-)	Redox Dari		(F6)		_ Other (Explain III Remarks)
The second secon	Below Dark Surfac	e (A11)	Depleted D		C. C. Carlotte		
	rk Surface (A12)	c (rill)	Redox Dep				3Indicators of hydrophytic vegetation and
	lucky Mineral (S1)		Vernal Poo		7		wetland hydrology must be present,
	leyed Matrix (S4)			3 4 34			unless disturbed or problematic.
	ayer (if present):						
Type:							
Depth (inc	ches):						Hydric Soil Present? Yes X No
temarks:							
YDROLO							
	Irology Indicators:	e diero National	a de la Million Vista de				Outside the character of the control of
	ators (minimum of o	ne required; ch					Secondary Indicators (2 or more required)
and the second s	Water (A1)		Salt Crust				Water Marks (B1) (Riverine)
	ter Table (A2)		Biotic Crus	7.46			Sediment Deposits (B2) (Riverine)
Saturatio	n (A3)		Aquatic In				Drift Deposits (B3) (Riverine)
	arks (B1) ( <b>Nonriver</b> i		Hydrogen				Drainage Patterns (B10)
_ Sedimen	t Deposits (B2) (Nor	nriverine)			res along Liv	ing Roots	
Drift Dep	osits (B3) (Nonriver	ine)			ed Iron (C4)		Crayfish Burrows (C8)
_ Surface S	Soil Cracks (B6)		Recent Iro	n Reducti	on in Tilled S	Soils (C6)	Saturation Visible on Aerial Imagery (C9
Inundatio	n Visible on Aerial I	magery (B7)	Thin Muck				Shallow Aquitard (D3)
_ Water-St	ained Leaves (B9)		Other (Exp	olain in Re	marks)		FAC-Neutral Test (D5)
ield Observ			0.00000				
urface Wate	r Present? Y	es X No	Depth (in	ches):	3		
Vater Table F	Present? Ye	es X No	Depth (in	ches);	1	1	
aturation Pro	esent? Ye	s Y No	Depth (in	ches):	5	Wetland	d Hydrology Present? Yes X No
ncludes cap	illary fringe)			/			
escribe Rec	orded Data (stream	gauge, monito	ring well, aerial p	photos, pr	evious inspe	ctions), if a	available:
Remarks: Z	. 1 4	1 1	2 OL +	Loga	/11	4.101 3	to Awide
	ample point	in int	ermi blue	511	me O	10010	2 cort wice

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

Project/Site: Lilac Hills To	Zanch		City/County: San D		
Applicant/Owner: Accresture	/			State:CA	_ Sampling Point:
Investigator(s): 6 School			Section, Township, R	ange:	
Landform (hillslope, terrace, etc.): <u>U&amp;</u> Subregion (LRR): <u>LRR-C</u>	2	Lat:		_ Long:	Datum:
Soil Map Unit Name: Fallbook	5600	dy Los	m	NWI classifi	cation:
Are climatic / hydrologic conditions on the	e site typical fo	r this time of ye	ar? Yes X No	(If no, explain in I	Remarks.)
Are Vegetation, Soil, or H	lydrology	significantly	disturbed? No Are	"Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or H	ydrology	naturally pro	oblematic? No (If n	eeded, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS - At	tach site m	ap showing	sampling point	locations, transects	s, important features, etc
Hydrophytic Vegetation Present?	Yes	No	Is the Sample	d Area	
Hydric Soil Present?	Yes	No	within a Wetla		No
Wetland Hydrology Present?	Yes	No	within a wetia	ild: Tes	
VEGETATION – Use scientific i	names of p	Absolute	Dominant Indicator	Dominance Test work	rsheet.
Tree Stratum (Plot size: 10m2	)	% Cover	Species? Status	Number of Dominant S	
1. Quevus agritolia		40	Y UPL	That Are OBL, FACW,	
2. Washingtonia robus		5_	N FAC	Total Number of Domir	nant -
3. Salus Casiolopis			2 FACW	Species Across All Stra	
4				Percent of Dominant S	necies
Carling/Christ Ctratium / Diet sine		55	= Total Cover	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size:				Prevalence Index wor	ksheet
2.				Total % Cover of:	
3					x 1 =
4.				FACW species 10	
5.					5 x3= 13 5
			= Total Cover	FACU species	
Herb Stratum (Plot size:				UPL species 40	
1. None				Column Totals: 95	(A) 355 (B)
2				B	= B/A =
3					
4				Hydrophytic Vegetation	
5				Dominance Test is Prevalence Index i	
6.					s sa.u ptations¹ (Provide supporting
7,			<del></del>		s or on a separate sheet)
8			- Tatal Carra		phytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:	y	4-77	= Total Cover		
1. Vitis girdiana		40	Y FAC		I and wetland hydrology must
2.				be present, unless distr	urbed or problematic.
			= Total Cover	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 5	% Co	over of Biotic Cr	ust	Present? Ye	s No <u>×</u>
Remarks:					

Profile Desc	ription: (Describe	to the depth	needed to docur	nent the ir	ndicator	or confirm	the absent	ce of indicato	ors.)	
Depth	Matrix			x Features		Loc <sup>2</sup>	Tankina		Remarks	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc	Texture		Remarks	
6-18	107R3/3				_		Loany	Sand		
Type: C=Co lydric Soil Ir	ncentration, D=Depl	etion, RM=R	educed Matrix, CS	S=Covered wise note	or Coate	d Sand Gra			Pore Lining, M=Matr matic Hydric Solls³	
Histosol (	(A1)		Sandy Redo	ox (S5)				Muck (A9) (L		
the second secon	ipedon (A2)		Stripped Ma					Muck (A10) (		
Black His			Loamy Muc					ced Vertic (F		
	Sulfide (A4)		Loamy Gley		(F2)			Parent Materi		
	Layers (A5) (LRR C	:)	Depleted Ma	Sample of the second			_ Othe	r (Explain in F	Remarks)	
	ck (A9) (LRR D)	10.000	Redox Dark							
and the second s	Below Dark Surface	(A11)	Depleted Da				3 Indicator	a of hydrophy	tic vegetation and	
	rk Surface (A12)		Redox Depr Vernal Pools		8)			AND THE RESERVE THE PARTY OF TH	nust be present,	
	ucky Mineral (S1)		vemai Pools	s (F9)				disturbed or p		
Sandy Gi	eyed Matrix (S4)						0111699	disturbed of b	JODIE Made.	
Restrictive L	ayer (if present):									
Restrictive La Type:	ayer (if present):		-				Undella Ca	U Descent2	Van Na	×
Restrictive La Type: Depth (inch	ayer (if present):	uil ind	- dicators	observ	ed.		Hydric So	il Present?	Yes No	×
YDROLOG  Wetland Hydro Surface V High Water Ma Sediment Drift Depo	rology Indicators: ators (minimum of on Vater (A1) er Table (A2) n (A3) rks (B1) (Nonriverir Deposits (B2) (Nonriverir osits (B3) (Nonriverir osits (B3) (Nonriverir	ne required; c ne) riverine)	check all that apply Salt Crust Biotic Crus Aquatic Inv Hydrogen S Oxidized R	(B11) t (B12) rertebrates Sulfide Odd hizosphere of Reduced	(B13) or (C1) es along L I Iron (C4)		Secondary Second	ondary Indicat Water Marks Sediment Dep Drift Deposits Drainage Patt Dry-Season V Crayfish Burr	ors (2 or more requi (B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) pws (C8)	ed))
YDROLOG  Vetland Hydro Surface V High Water Ma Sediment Drift Depo Surface S	rology Indicators: ators (minimum of on Vater (A1) er Table (A2) n (A3) arks (B1) (Nonrivering Deposits (B2) (Nonrivering Soil Cracks (B6)	ne required; c ne) riverine) ne)	check all that apply Salt Crust Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c	(B11) t (B12) rertebrates Sulfide Odo hizosphere of Reduced	(B13) or (C1) es along L f Iron (C4) n in Tilled		Second Se	ondary Indicat Water Marks Sediment Dep Drift Deposits Drainage Patt Dry-Season V Crayfish Burro Saturation Vis	cors (2 or more requi (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) cows (C8) sible on Aerial Image	ed))
YDROLOG  Vetland Hydro Surface V High Water Saturation Water Ma Sediment Drift Depo	ayer (if present):  hes):  v hydric 5:  rology Indicators: ators (minimum of on Vater (A1) er Table (A2) h (A3) krks (B1) (Nonriverir Deposits (B2) (Non posits (B3) (Nonriverir ioil Cracks (B6) h Visible on Aerial In	ne required; c ne) riverine) ne)	check all that apply Salt Crust Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence co	(B11) t (B12) rertebrates Sulfide Odo hizosphere of Reduced n Reductior Surface (C	(B13) or (C1) es along L I Iron (C4) n in Tilled		Seco	ondary indicat Water Marks Sediment Dep Drift Deposits Drainage Patt Dry-Season V Crayfish Burrd Saturation Vis Shallow Aquit	ors (2 or more requi (B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) pws (C8) sible on Aerial Image ard (D3)	ed)
Primary Indica Saturation Water Ma Sediment Drift Depo Surface Surface V High Water Saturation Water Ma Sediment Drift Depo Surface Su	ayer (if present):  hes):  v hydric 54  rology Indicators: ators (minimum of on Vater (A1) er Table (A2) h (A3) rks (B1) (Nonriverir Deposits (B2) (Non posits (B3) (Nonriveri soil Cracks (B6) h Visible on Aerial In ained Leaves (B9)	ne required; c ne) riverine) ne)	check all that apply Salt Crust Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c	(B11) t (B12) rertebrates Sulfide Odo hizosphere of Reduced n Reductior Surface (C	(B13) or (C1) es along L I Iron (C4) n in Tilled		Seco	ondary Indicat Water Marks Sediment Dep Drift Deposits Drainage Patt Dry-Season V Crayfish Burro Saturation Vis	ors (2 or more requi (B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) pws (C8) sible on Aerial Image ard (D3)	ed))
Primary Indica Saturation Water Ma Surface V High Wate Saturation Water Ma Sediment Drift Depo Surface S Inundation Water-Sta	ayer (if present):  hes):  v hydric Solutions: ators (minimum of on Vater (A1) er Table (A2) h (A3) rks (B1) (Nonriverir Deposits (B2) (Non iosits (B3) (Nonriveris ioil Cracks (B6) h Visible on Aerial Imained Leaves (B9) ations:	ne required; one) riverine) ne) nagery (B7)	check all that apply Salt Crust Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Thin Muck	(B11) t (B12) ertebrates Sulfide Odd hizosphere of Reduced n Reduction Surface (C	(B13) or (C1) es along L f Iron (C4) n in Tilled c7) narks)	Soils (C6)	Seco	ondary indicat Water Marks Sediment Dep Drift Deposits Drainage Patt Dry-Season V Crayfish Burrd Saturation Vis Shallow Aquit	ors (2 or more requi (B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) pws (C8) sible on Aerial Image ard (D3)	ed))
Primary Indica Surface V High Water Ma Sediment Drift Depo Surface S Inundation Water-Sta	ayer (if present):  hes):  v hy dric Si  rology Indicators: ators (minimum of on Vater (A1) er Table (A2) h (A3) rks (B1) (Nonriverir Deposits (B2) (Non posits (B3) (Nonriveri coil Cracks (B6) h Visible on Aerial In ained Leaves (B9) ations: Present? Ye	ne required; one) riverine) ne) nagery (B7)	sheck all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Other (Exp	(B11) t (B12) rertebrates Sulfide Odd hizosphere of Reduced n Reductior Surface (C	(B13) or (C1) es along L I Iron (C4) n in Tilled c7) narks)	Soils (C6)	Seco	ondary indicat Water Marks Sediment Dep Drift Deposits Drainage Patt Dry-Season V Crayfish Burrd Saturation Vis Shallow Aquit	ors (2 or more requi (B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) pws (C8) sible on Aerial Image ard (D3)	ed))
YDROLOG  Wetland Hydro Surface V High Water Ma Sediment Drift Depo	ayer (if present):  hes):  Volume dric Si  rology Indicators: ators (minimum of on Vater (A1) er Table (A2) h (A3) hrks (B1) (Nonriverir Deposits (B2) (Non Desits (B3) (Nonriveri Soil Cracks (B6) h Visible on Aerial In ained Leaves (B9) ations: Present? Ye Present? Ye	ne required; one) riverine) ne) nagery (B7) s No	check all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Other (Exp	(B11) t (B12) rertebrates Sulfide Odd hizosphere of Reduction Surface (C lain in Rem	(B13) or (C1) es along L I Iron (C4) n in Tilled c7) narks)	Soils (C6)	Second	ondary Indicat Water Marks Sediment Dep Drift Deposits Drainage Pati Dry-Season V Crayfish Burn Saturation Vis Shallow Aquit FAC-Neutral	cors (2 or more requi (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) cows (C8) sible on Aerial Image ard (D3) Test (D5)	red)
Type:	ayer (if present):  hes):  v hy dric 5:  rology Indicators: ators (minimum of on Vater (A1) er Table (A2) h (A3) rks (B1) (Nonriverir Deposits (B2) (Nonriverir (B3) (Nonriverir (B4)) coil Cracks (B6) h Visible on Aerial Intained Leaves (B9) ations: Present? Yesent? Yesent? Yesent? Yesent?	ne required; cone) riverine) nagery (B7) s No s No	sheck all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Other (Exp	(B11) t (B12) rertebrates Sulfide Odo hizosphere of Reduced n Reductior Surface (C lain in Rem thes);	(B13) or (C1) es along L I Iron (C4) n in Tilled (7) narks)	Soils (C6)	Second Se	ondary Indicat Water Marks Sediment Dep Drift Deposits Drainage Pati Dry-Season V Crayfish Burn Saturation Vis Shallow Aquit FAC-Neutral	ors (2 or more requi (B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) pws (C8) sible on Aerial Image ard (D3)	ry (C
Primary Indicates Surface Vater Males Surface	ayer (if present):  hes):  lu hydric Si  rology Indicators: ators (minimum of on Vater (A1) er Table (A2) h (A3) rks (B1) (Nonriverir Deposits (B2) (Non posits (B3) (Nonriveri soil Cracks (B6) h Visible on Aerial In ained Leaves (B9) ations: Present? Ye resent? Ye resent? Ye resent? Ye resent? Ye resent?	ne required; cone) riverine) nagery (B7) s No s No	sheck all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Other (Exp	(B11) t (B12) rertebrates Sulfide Odo hizosphere of Reduced n Reductior Surface (C lain in Rem thes);	(B13) or (C1) es along L I Iron (C4) n in Tilled (7) narks)	Soils (C6)	Second Se	ondary Indicat Water Marks Sediment Dep Drift Deposits Drainage Pati Dry-Season V Crayfish Burn Saturation Vis Shallow Aquit FAC-Neutral	cors (2 or more requi (B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) terns (B10) Vater Table (C2) cows (C8) sible on Aerial Image ard (D3) Test (D5)	ry (C

roject/Site: Lilac Hills Ranch oplicant/Owner: Accretive Group vestigator(s): 6. Scheid	)		Chata. CA	
vestigator(s): 6. Sched		E CONTRACTOR OF THE PARTY OF TH	State:	_ Sampling Point:
indform (hillslope, terrace, etc.): Steep Sto	pe	Local relief (con	cave, convex, none):	vey Slope (%): 10
ibregion (LRR): LRR-C	Lat:		Long:	Datum:
oil Map Unit Name: Steep gelled	Land		NWI classi	fication:
e climatic / hydrologic conditions on the site typical t				
e Vegetation, Soil, or Hydrology				
e Vegetation, Soil, or Hydrology				
JMMARY OF FINDINGS – Attach site n				
lydrophytic Vegetation Present? Yes	No X			
lydric Soil Present? Yes			npled Area Vetland? Yes	N= X
Vetland Hydrology Present? Yes		within a V	Vetland? Yes	No/
EGETATION - Use scientific names of				
A region of the second of the	Absolute	Dominant Indic		ksheet:
ree Stratum (Plot size:)	% Cover	Species? State	Number of Dominant	
None			That Are OBL, FACW	, or FAC: (A)
			Total Number of Dom	
			Species Across All Str	rata: (B)
		= Total Cover	Percent of Dominant S That Are OBL, FACW	
apling/Shrub Stratum (Plot size: 20 m²)			The second of the second second	
Lylococcus bicolor				
			Total % Cover of:	
				x 1 = x 2 =
				x 3 =
		= Total Cover	The second secon	x 4 =
erb Stratum (Plot size; Zwa Z)		- Total Cover		x5= 325
Bromus Sp.	40	y UK		5 (A) 325 (B)
		P UP	_	
Salsola tragus		- P up		x = B/A = 4.3
			Hydrophytic Vegetat	
			Dominance Test i	
				aptations <sup>1</sup> (Provide supporting
			data in Remark	ks or on a separate sheet)
	55	= Total Cover	Problematic Hydro	ophytic Vegetation¹ (Explain)
oody Vine Stratum (Plot size:)		- Total Cover		
				oil and wetland hydrology must
			be present, unless dis	urbed or problematic.
Boro Cround in Host Stratum 25		= Total Cover	Hydrophytic Vegetation	×
A North Control of the Control of th	Cover of Biotic Cri	ust	Present? Ye	es No
emarks:				

No hydrology indicators observed, Sample and a series of steep ephemeral drainages. Other = 3-5+4 wide non-wellend water stream bed

Project/Site: Lilac Hills Ranc Applicant/Owner: Accreture Group	2		State: <u>CA</u> Samplin	g Point: _ 4/3 G		
Investigator(s): 6. Scheid		Section, Township, Ra	ange:			
Landform (hillslope, terrace, etc.): Sully bo	Hom	Local relief (concave, convex, none): Concave Slope (%): 0-5				
Subregion (LRR): LRR-C	Lat:	Long: Datum:				
Soil Map Unit Name: Steep gulled			NWI classification:			
Are climatic / hydrologic conditions on the site typical						
Are Vegetation, Soil, or Hydrology		and the second s				
Are Vegetation, Soil, or Hydrology				/		
SUMMARY OF FINDINGS - Attach site r						
Hydrophytic Vegetation Present? Yes 🗸	Ne					
	No	Is the Sampleo				
Wetland Hydrology Present? Yes	No	within a Wetlan	nd? Yes X No			
Remarks:						
/EGETATION – Use scientific names of	olants.	Dominant Indicator	Dominance Test worksheet:			
Tree Stratum (Plot size: 20 m 2)	% Cover	Species? Status	Number of Dominant Species	3		
1. Salix gooddingii	30_	J FACW	That Are OBL, FACW, or FAC:	(A)		
2.			Total Number of Dominant	3		
3			Species Across All Strata;	(B)		
4	30	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:			
1. None			Prevalence Index worksheet:			
2.			Total % Cover of:	Multiply by:		
3			OBL species x	=		
4			FACW species x2			
5			FAC species x3			
Herb Stratum (Plot size: 70 m²)		= Total Cover	FACU species x			
1. Ludwigia peptiedes	40	4 OBL	UPL species x & Column Totals: (A)			
	20	y OBL	Column Totals: (A)	(B)		
3.			Prevalence Index = B/A =			
4			Hydrophytic Vegetation Indicat	ors:		
5			Dominance Test is >50%			
6			— Prevalence Index is ≤3.01			
7			Morphological Adaptations¹ ( data in Remarks or on a s			
8			Problematic Hydrophytic Veg			
Woody Vine Stratum (Plot size:)	60	= Total Cover		STREET, STREET		
1			<sup>1</sup> Indicators of hydric soil and wetla			
2.			be present, unless disturbed or pr	oblematic.		
	/	= Total Cover	Hydrophytic			
% Bare Ground in Herb Stratum % C	Cover of Biotic Cr	ust	Vegetation Present? Yes	No		
Remarks:			100			
Serial No.						

Sampling Point: 4/3

Profile Description: (Describe to the o	Redo	x Features	V.Y. V.O.L.S.						
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc2	Texture		1	Remarks	
0-8 10423/2 80	57R618	20_		m	16ax	ay C	ay		
8-16 104R3/1 90	5486/8		_RM	m	, k				
		_				_			
						Ξ			
<sup>1</sup> Type: C=Concentration, D=Depletion, R Hydric Soil Indicators: (Applicable to	RM=Reduced Matrix, CS	=Covered	or Coated	Sand Gra				e Lining, M= ic Hydric Sc	
그런 그렇게 되면 되었다면서 그렇게 그렇게 되어 있는데 그렇게 되었다. 그렇게 그렇게	Sandy Redo		u.,				49) (LRR		
Histosol (A1) Histic Epipedon (A2)	Stripped Ma						410) (LR		
Black Histic (A3)	Loamy Much		(F1)				rtic (F18)		
Hydrogen Sulfide (A4)	Loamy Gley						Material (		
Stratified Layers (A5) (LRR C)	X Depleted Ma				Othe	r (Expla	in in Ren	narks)	
1 cm Muck (A9) (LRR D)	Redox Dark	The section of the section of the section of	6)						
Depleted Below Dark Surface (A11)	Depleted Da	rk Surface	(F7)						
Thick Dark Surface (A12)	Redox Depr		8)				and the second second	vegetation ar	nd
Sandy Mucky Mineral (S1)	Vernal Pools	s (F9)						be present,	
Sandy Gleyed Matrix (S4)					unless	disturbe	ed or prob	olematic.	
Restrictive Layer (if present):									
Type:									
					2// 10 345	2.5	-10. 33	V-	100
Depth (inches):Remarks:					Hydric So	il Prese	ent? Yo	es <u>X</u>	No
Remarks:					Hydric So	il Prese	ent? Yo	es X	No
Remarks:					Hydric So	il Prese	ent? Yo	es X	No
Remarks:  YDROLOGY  Wetland Hydrology Indicators:	red: check all that apply	()							
Remarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi					Seco	ondary I	ndicators	(2 or more r	
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi	Salt Crust (	B11)			Seco	ondary I Water N	ndicators farks (B1	(2 or more r	equired)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi   ✓ Surface Water (A1)  ✓ High Water Table (A2)	Salt Crust ( Biotic Crust	B11) t (B12)	(B13)		Seco	ondary I Water M Sedime	ndicators 1arks (B1 nt Depos	(2 or more r ) (Riverine) its (B2) (Rive	equired)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi   ✓ Surface Water (A1)  ✓ High Water Table (A2)  ✓ Saturation (A3)	Salt Crust ( Biotic Crust Aquatic Inv	B11) t (B12) ertebrates	Assessment of the second		Seco	ondary I Water N Sedime Drift De	ndicators 1arks (B1 nt Depos	(2 or more r ) (Riverine) its (B2) (Rive 3) (Riverine)	equired)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi   ✓ Surface Water (A1)  ✓ High Water Table (A2)  ✓ Saturation (A3)  — Water Marks (B1) (Nonriverine)	Salt Crust ( Biotic Crust Aquatic Inv Hydrogen S	(B11) t (B12) ertebrates Sulfide Odo	or (C1)	ving Roots	Second Se	ondary I Water N Sedime Drift De Drainag	ndicators 1arks (B1 nt Depos posits (B: e Pattern	(2 or more r ) (Riverine) its (B2) (Rive 3) (Riverine)	equired)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Y Surface Water (A1) Y High Water Table (A2) Y Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	Salt Crust ( Biotic Crust Aquatic Inv Hydrogen S	B11) t (B12) ertebrates Sulfide Odo hizosphere	or (C1) es along Li	ving Roots	Second	ondary I Water M Sedime Drift De Drainag Dry-Sea	ndicators 1arks (B1 nt Depos posits (B: e Pattern	(2 or more r ) (Riverine) its (B2) (Rive 3) (Riverine) is (B10) er Table (C2	equired)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requivations)  Y Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)	Salt Crust ( Biotic Crust Aquatic Inv Hydrogen S Oxidized R	B11) t (B12) ertebrates Sulfide Odo hizosphere tf Reduced	or (C1) es along Li Iron (C4)		Second	ondary I Water N Sedime Drift De Drainag Dry-Sea Crayfish	ndicators Marks (B1 nt Depos posits (B: e Pattern ison Wat	(2 or more r ) (Riverine) its (B2) (Rive 3) (Riverine) is (B10) er Table (C2	equired)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Y Surface Water (A1) Y High Water Table (A2) Y Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S  Oxidized R  Presence o Recent Iror	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction	or (C1) es along Li Iron (C4) n in Tilled		Second Se	ondary I Water N Sedime Drift De Drainag Dry-Sea Crayfish Saturati	ndicators Marks (B1 nt Depos posits (B: e Pattern ison Wat	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) is on Aerial In	equired)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi   ✓ 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)	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S  Oxidized R  Presence o Recent Iror	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C'	or (C1) es along Li Iron (C4) n in Tilled ( 7)		Secondary Second	ondary I Water M Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow	ndicators Marks (B1 nt Depos posits (B: e Pattern ason Wat n Burrows on Visible	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3)	equired) erine)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requily 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  Water-Stained Leaves (B9)	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S  e) Oxidized RI Presence o Recent Iron (B7) Thin Muck	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C'	or (C1) es along Li Iron (C4) n in Tilled ( 7)		Secondary Second	ondary I Water M Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow	ndicators farks (B1 nt Depos posits (B: e Pattern son Wat a Burrows on Visible Aquitard	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3)	equired)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requivations)  Yourface 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  Water-Stained Leaves (B9)	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S  Oxidized Ri Presence o Recent Iron (B7) Thin Muck	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C'	or (C1) es along Li Iron (C4) n in Tilled ( 7)		Secondary Second	ondary I Water M Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow	ndicators farks (B1 nt Depos posits (B: e Pattern son Wat a Burrows on Visible Aquitard	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3)	equired)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi   ✓ 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  — Water-Stained Leaves (B9)  Field Observations:	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S  e) Oxidized RI Presence o Recent Iron (B7) Thin Muck	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C' lain in Rem	or (C1) es along Li Iron (C4) n in Tilled ( 7)		Secondary Second	ondary I Water M Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow	ndicators farks (B1 nt Depos posits (B: e Pattern son Wat a Burrows on Visible Aquitard	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3)	equired) erine)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi   ✓ 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  — Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves  ✓  Water Table Present?	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S e) Oxidized R Presence o Recent Iror (B7) Thin Muck ( Other (Expl	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C' lain in Rem thes): 12	or (C1) es along Li Iron (C4) n in Tilled ( 7)	Soils (C6)	Second Se	ondary I Water N Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators Marks (B1 nt Depos posits (B: e Pattern son Wat Burrows on Visible Aquitard utral Tes	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3) t (D5)	equired) erine)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi   ✓ 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  — Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Water Table Present?  Saturation Present?  Yes  ✓ Yes  Saturation Present?  Yes  ✓ Yes  Saturation Present?	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S e) Oxidized RI Presence of Recent Iron (B7) Thin Muck S Other (Expl	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C' lain in Rem thes): 12 hes): 4	or (C1) as along Li Iron (C4) a in Tilled 7) arks)	Soils (C6)	Second Se	ondary I Water N Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators Marks (B1 nt Depos posits (B: e Pattern son Wat Burrows on Visible Aquitard utral Tes	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3) t (D5)	equired) erine) magery (C9)
IYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi   ✓ 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  — Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  — Yes  ✓  Water Table Present?	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S e) Oxidized RI Presence of Recent Iron (B7) Thin Muck S Other (Expl	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C' lain in Rem thes): 12 hes): 4	or (C1) as along Li Iron (C4) a in Tilled 7) arks)	Soils (C6)	Second Se	ondary I Water N Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators Marks (B1 nt Depos posits (B: e Pattern son Wat Burrows on Visible Aquitard utral Tes	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3) t (D5)	equired) erine) magery (C9)
IYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi   ✓ 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  — Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Water Table Present?  Yes  ✓ Saturation Present?  Yes  ✓ (includes capillary fringe)  Describe Recorded Data (stream gauge, includes capillary fringe)	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S e) Oxidized R Presence of Recent Iron (B7) Thin Muck ( Other (Expl No Depth (inc No Depth (inc No Depth (inc monitoring well, aerial p	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C' lain in Rem thes):	or (C1) es along Li fron (C4) in in Tilled 7) harks)	Wetlar	Second Se	ondary I Water N Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators Marks (B1 nt Depos posits (B: e Pattern son Wat Burrows on Visible Aquitard utral Tes	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3) t (D5)	equired) erine) magery (C9)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requivable)  ✓ 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  — Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes  ✓ Mater Table Present?  Yes  ✓ Saturation Present?  Yes  ✓ Includes capillary fringe)  Describe Recorded Data (stream gauge, includes capillary fringe)	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S e) Oxidized R Presence of Recent Iron (B7) Thin Muck ( Other (Expl No Depth (inc No Depth (inc No Depth (inc monitoring well, aerial p	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C' lain in Rem thes):	or (C1) es along Li fron (C4) in in Tilled 7) harks)	Wetlar	Second Se	ondary I Water N Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators Marks (B1 nt Depos posits (B: e Pattern son Wat Burrows on Visible Aquitard utral Tes	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3) t (D5)	equired) erine) magery (C9)
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requi   ✓ 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  — Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves  — Saturation Present?  Ves  — Saturation Present?  Service Recorded Data (stream gauge, includes capillary fringe)	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S e) Oxidized R Presence of Recent Iron (B7) Thin Muck ( Other (Expl No Depth (inc No Depth (inc No Depth (inc monitoring well, aerial p	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C' lain in Rem thes):	or (C1) es along Li fron (C4) in in Tilled 7) harks)	Wetlar	Second Se	ondary I Water N Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators Marks (B1 nt Depos posits (B: e Pattern son Wat Burrows on Visible Aquitard utral Tes	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3) t (D5)	equired) erine) magery (C9)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one requivable)  Y 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  Water-Stained Leaves (B9)  Veter Table Present?  Vater Table Present?  Ves  Saturation Present?  Ves  Vater Table Present?	Salt Crust ( Biotic Crust ( Aquatic Inv Hydrogen S e) Oxidized R Presence of Recent Iron (B7) Thin Muck ( Other (Expl No Depth (inc No Depth (inc No Depth (inc monitoring well, aerial p	B11) t (B12) ertebrates Sulfide Odo hizosphere of Reduced n Reduction Surface (C' lain in Rem thes):	or (C1) es along Li fron (C4) in in Tilled 7) harks)	Wetlar	Second Se	ondary I Water N Sedime Drift De Drainag Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators Marks (B1 nt Depos posits (B: e Pattern son Wat Burrows on Visible Aquitard utral Tes	(2 or more r ) (Riverine) its (B2) (Riverine) is (B10) er Table (C2 is (C8) e on Aerial In (D3) t (D5)	equired) erine) nagery (C9)

Project/Site: Lilac Hills	Ranch		City/County: Sand	Diege San Diego Sampling Date: 2-14-12			
Applicant/Owner: Accretive a	5 roup		63.600 - 0.000	State: CA Sampling Point: 44 3			
Investigator(s): 6-Scheich				ange:			
			Local relief (concave, convex, none): Slope (%):				
Subregion (LRR): LRR-				Long: Datum:			
Soil Map Unit Name: Steep 300	4			NWI classification:			
3			- 4				
Are climatic / hydrologic conditions on t							
Are Vegetation, Soil, or			A STATE OF THE PARTY OF THE PAR	"Normal Circumstances" present? Yes No			
Are Vegetation, Soil, or	Hydrology	naturally pro	oblematic? Po (If n	needed, explain any answers in Remarks.)			
SUMMARY OF FINDINGS - A	ttach site m	nap showing	sampling point	locations, transects, important features, etc.			
Hydrophytic Vegetation Present?	Yes	No X	Is the Sample	d Area			
Hydric Soil Present?	Yes	No X	within a Wetla				
Wetland Hydrology Present?	Yes		within a wetta	mar resNo			
VEGETATION – Use scientific	names of p	. 335 307 7 1 =					
Tree Stratum (Plot size: Zum Z	- 1	Absolute % Cover	Dominant Indicator	Dominance Test worksheet:			
1. Duerous agrifolia		70	y UPL	Number of Dominant Species That Are OBL, FACW, or FAC:(A)			
2.			-0				
3				Total Number of Dominant Species Across All Strata:  Z (B)			
4.				Edward C. Construction			
Sapling/Shrub Stratum (Plot size:		70	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)			
1. none				Prevalence Index worksheet:			
2				Total % Cover of: Multiply by:			
3				OBL species x 1 =			
4				FACW species x 2 =			
5				FAC species 25 x3 = 75			
Herb Stratum (Plot size: Zom2	)	-	= Total Cover	FACU species x 4 =			
1. Conciem maculat	um	25	4 FAC	UPL species $70 \times 5 = 350$ Column Totals: $95 \times (A) \times (25 \times (B))$			
2.			0	Destruction of the contract of			
3.				Prevalence Index = B/A = 4,4			
4				Hydrophytic Vegetation Indicators:			
5,				Dominance Test is >50%			
6				— Prevalence Index is ≤3.01			
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
Woody Vine Stratum (Plot size:	N.	25	= Total Cover				
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must			
1				be present, unless disturbed or problematic.			
2;	4. 1. 10		= Total Cover	Hydrophytic Vegetation			
% Bare Ground in Herb Stratum	5 %C	over of Biotic Cr	ust	Present? Yes No			
Remarks:							

		72	
-	~		
-	1		

Sampling Point: 44

Depth (inches)	Color (moist)	%	Color (moist)		Type1	Loc <sup>2</sup>	Texture	Remarks
0-10		100	0010. (1.10101)					
10-16	104R3/2	100						
	oncentration, D=Dep					d Sand Gra		tion: PL=Pore Lining, M=Matrix.
Histosol Histic Ep Black Hi Hydroge Stratified 1 cm Mu	Indicators: (Applications: (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) (LRR of the layers) d Below Dark Surface	C)	Sandy Rede Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Dark	ox (S5) atrix (S6) by Mineral yed Matrix atrix (F3) s Surface (F	(F1) (F2) F6)		1 cm Mur 2 cm Mur Reduced Red Pare	ck (A9) (LRR C) ck (A10) (LRR B) I Vertic (F18) ent Material (TF2) xplain in Remarks)
Thick Da	ark Surface (A12) Mucky Mineral (S1) Bleyed Matrix (S4)	C (A11)	Redox Depi	ressions (F			wetland hy	hydrophytic vegetation and drology must be present, urbed or problematic.
Anneal address I								
restrictive i	Layer (if present):							
Type:	Layer (if present):		_				La confirme	gertha arts on day
Type: Depth (inc		Lindic	ictors obs	erved	( ,		Hydric Soil Pr	resent? YesNo_X
Type: Depth (inc Remarks: ှ	ches):	Lindic	ictors obs	ervecl	C.e.		Hydric Soil Pr	resent? YesNo_ <u>X</u>
Type:	ches):	Lindic	- ictors obs	erved			Hydric Soil Pr	resent? YesNo_X
Type: Depth (included)  Primary Indicutes Surface High Waster M Sedimer Drift Dep Surface Inundation Water-Si	GY drology Indicators: cators (minimum of o Water (A1) arter Table (A2) on (A3) larks (B1) (Nonriver at Deposits (B2) (Non cosits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial I tained Leaves (B9)	ne required; ( ine) nriverine) rine)		y) (B11) st (B12) vertebrates Sulfide Ode Rhizosphere of Reduced n Reductio Surface (C	i (B13) or (C1) es along Li d Iron (C4) n in Tilled C7)		Seconda  Wate Sed Drift  Coray Set Cray Set Shale	resent? Yes No
Type:	GY drology Indicators: cators (minimum of o Water (A1) arter Table (A2) on (A3) larks (B1) (Nonriver at Deposits (B2) (Non cosits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial I tained Leaves (B9) vations: er Present? Y	ne required; of the priverine) magery (B7) es No es No es No	check all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro Thin Muck Other (Exp	y) (B11) st (B12) vertebrates Sulfide Odd Rhizosphere of Reduced n Reductio Surface (Colain in Ren ches):	(B13) or (C1) es along Li Iron (C4) n in Tilled C7) narks)	Soils (C6)	Seconda  Wat Sed Drift  Cray Satu Shal	ary Indicators (2 or more required) er Marks (B1) (Riverine) iment Deposits (B2) (Riverine) Deposits (B3) (Riverine) nage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9

Applicant/Owner: <u>Accretive (</u> Investigator(s): <u>6-5 cheiol</u>	)		Section, Township	State: , Range:			
_andform (hillslope, terrace, etc.): Subregion (LRR): R		Lat:		ve, convex, none):			
Soil Map Unit Name: 5 Loup que							
Are climatic / hydrologic conditions on the							
		A STATE OF THE PARTY OF THE PAR				· · ·	A.
Are Vegetation, Soil, or			7				
Are Vegetation, Soil, or	Hydrology	naturally pro	blematic? No (	If needed, explain any	answers in Rema	irks.)	
SUMMARY OF FINDINGS - A	ttach site ma	ap showing	sampling poin	nt locations, tran	sects, import	ant feature	s, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes 7 Yes 7	No No	is the Samp		sNo_		
Remarks: Nature vegetation	m un notes el	de died h	61	1.1.0.0.	,	7	
dumping.	- William	Jana	ec aue 40 p	a tras Clean	y and gr	een waste	
/EGETATION – Use scientific	names of pl	ants.					
		Absolute	Dominant Indicat		t worksheet:		
Tree Stratum (Plot size:	_)		Species? Status	Inditibet of Doutin		2	
				That Are OBL, F	ACVV, or FAC: _		(A)
2				Total Number of		2	(D)
3. 4.				Species Across	Ali Strata:		(B)
Sapling/Shrub Stratum (Plot size:	(Dan = )		= Total Cover	Percent of Domin		100	(A/B)
1. Bacchairs Sahrifoli		60	Y FACU	Prevalence Inde	ex worksheet:		
2.					er of:	Multiply by:	3
3				OBL species	× 1	-	3
4				FACW species	x 2	=	
5				FAC species	x 3	=	-
		60	= Total Cover	FACU species	x 4	=	ale:
Herb Stratum (Plot size:	)		1 10		x 5		_
1. Concin maculation		30_	Y FAC	Column Totals:	(A)		_ (B)
2				- Brounlanes	Index = B/A = _		
3					getation Indicato		
4				Dominance		15.	
5				- During transport	ndex is ≤3.0 <sup>1</sup>		
6					al Adaptations¹ (P	rovide support	ting
7				data in R	emarks or on a se	parate sheet)	
8		2.3	= Total Cover	Problematic	Hydrophytic Vege	tation¹ (Explain	n)
Woody Vine Stratum (Plot size:	)		- Total Cover				
1.				Indicators of hyd	iric soil and wetlar	nd hydrology m	nust
2.				be present, unles	s disturbed or pro	blematic.	
			= Total Cover	Hydrophytic			
% Bare Ground in Herb Stratum	10 % Co	ver of Biotic Cr	ust	Vegetation Present?	Yes X	No	
w pare around in Help additing	/0 00	. SI SI DIOGO OII		1.1334111.		115	
Remarks:							

Sampling Point: 45

Depth Matrix		Redox Feature			AS 1.1.			Every a dela	
(inches) Color (moist)	% Color (	Marian Company of the	Type1	Loc2	Texture	-	_	Remarks	
10-12 104R3/2	95 BIRG	55	Pm	_a1	_Sando	veicl	ay lo	ran	
ype: C=Concentration, D=Deplet ydric Soil Indicators: (Applicab Histosol (A1)	le to all LRRs, unl Sa	ess otherwise not andy Redox (S5)	ed or Coated	d Sand Gra	Indicators 1 cm N	for Prob luck (A9)	lemati ) (LRR		
<ul> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5) (LRR C)</li> <li>1 cm Muck (A9) (LRR D)</li> <li>Depleted Below Dark Surface (AB)</li> </ul>	Lo Lo Ro	ripped Matrix (S6) pamy Mucky Minera pamy Gleyed Matrix epleted Matrix (F3) edox Dark Surface epleted Dark Surface	(F2) (F6)		Reduc	fuck (A10 ed Vertic arent Mat Explain i	(F18) terial (T	ΓF2)	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	R	edox Depressions ( ernal Pools (F9)				hydrology	y must	regetation ar be present, lematic.	d
Restrictive Layer (if present):									
Restrictive Layer (if present):  Type:					evenus as a	21111111	i let	12	
장이 경우를 가는 수 있다면 하는 것이 없는데 되었다. # -					Hydric Soil	Present	? Ye	s <u>X</u>	No
Type: Depth (inches): Remarks:  YDROLOGY					Hydric Soil	Present	? Ye	s <u>V</u>	No
Type: Depth (inches): Remarks:  YDROLOGY Wetland Hydrology Indicators:									
Type:	S B A verine) S verine) F B gery (B7) T	that apply) Salt Crust (B11) Siotic Crust (B12) Aquatic Invertebrate Hydrogen Sulfide O Oxidized Rhizosphe Resence of Reduce Recent Iron Reduction Thin Muck Surface of	dor (C1) res along L ed Iron (C4) ion in Tilled (C7)		Secon W Se Di Ci Ci Si Si	dary Indi fater Mari ediment I rift Depos rainage F ry-Season rayfish Bu	cators ks (B1) Deposit sits (B3 Patterns n Wate urrows Visible quitard	(2 or more re) (Riverine) ts (B2) (Riverine) s (B10) er Table (C2) (C8) on Aerial In (D3)	equired)
Type:	S   S   S   S   S   S   S   S   S   S	salt Crust (B11) Siotic Crust (B12) Equatic Invertebrate Sydrogen Sulfide O Exidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface ( Other (Explain in Re Depth (inches): Depth (inches):	dor (C1) Pres along L Pres alon	Soils (C6)	Secon  W Secon  Columbia  Si (C3)  Si (C3)  Si (C3)  Si (C3)	dary Indi fater Mari ediment I rift Depos rainage F ry-Season rayfish Bu rayfish Bu raturation nallow Ac	cators ks (B1) Deposit sits (B3 Patterns n Wate urrows Visible quitard al Test	(2 or more re) (Riverine) ts (B2) (Riverine) s (B10) er Table (C2) (C8) on Aerial In (D3)	equired) rine) agery (C9
Type:	S   S   S   S   S   S   S   S   S   S	salt Crust (B11) Siotic Crust (B12) Equatic Invertebrate Sydrogen Sulfide O Exidized Rhizosphe Presence of Reduce Recent Iron Reducti Thin Muck Surface ( Other (Explain in Re Depth (inches): Depth (inches):	dor (C1) Pres along L Pres alon	Soils (C6)	Secon  W Secon  Columbia  Si (C3)  Si (C3)  Si (C3)  Si (C3)	dary Indi fater Mari ediment I rift Depos rainage F ry-Season rayfish Bu rayfish Bu raturation nallow Ac	cators ks (B1) Deposit sits (B3 Patterns n Wate urrows Visible quitard al Test	(2 or more re) (Riverine) ts (B2) (Riverine) s (B10) er Table (C2) (C8) on Aerial In (D3)	equired) rine) agery (CS

Section, Township, Range:   Local relief (concave, none):   Central Slope (%):	Applicant/Owner: Acce five	/			State: Sampling Point:
Soli Map Unit Name: SHEEP GULLUL Land: NoVI classification: NovI classif		4.4			
Soil Map Unit Name: Steep Gulled Land Are climate? hydrologic conditions on the site typical for this time of year? Yes X no (If no, explain in Remarks.) Are recognitation 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 X no (If no, explain in Remarks.) Are Vegetation X, Soil or Hydrology naturally problemate? 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 within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No No Within a Wetland?  Fremarks: User Latin in worder Australia Absolute Dominant Indicator, Green Factor of Dominant Species 1. Salving French Stratum (Plot size: 2004) 1. Salving French Stratum (Plot size: 2004) 1. Salving French Stratum (Plot size: 2004) 1. Control Number of Dominant Species 1. Acres Species? Status Species Aross all Stratus Command Species 1. Acres Stratum (Plot size: 2004) 1. Control Number of Dominant Species 1. Acres Species X 1 = Factor Species X 2 = Factor Species X 3 = Factor	[2] : 이번 이번 시간 (1) : 1 (1) : 1 (1) : 1 (1) : 1 (1) : 1 (1) : 1 (1) : 1 (1) : 1 (1) : 1 (1) : 1 (1) : 1 (1) : 1	Bully			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)  Are Vegetation Soil or Hydrology significantly disturbed? Yes Are "Normal Circumstances" present? Yes No Are Vegetation No or Hydrology naturally problematic? No (If needed explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transvers, important features, etc.  Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No With		2 0			Long: Datum:
Are Vegetation X Soil or Hydrology significantly disturbed? Yes Are "Normal Circumstances" present? Yes No Are Vegetation Soil or Hydrology naturally problematic? Not (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 Wetland Hydrology Present? Yes No Wetland? Yes No W				7.1.	
Are Vegetation Soil or Hydrology naturally problematic? We (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 Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Wetland Hydrolo	Are climatic / hydrologic conditions on	the site typical for	or this time of yea	ar? Yes _ X No_	(If no, explain in Remarks.)
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present?  Yes No within a Wetland?  Yes No	Are Vegetation <u> </u>	r Hydrology	significantly	disturbed? YES Are	"Normal Circumstances" present? Yes No
Hydrophytic Vegetation Present? Yes No Within a Wetland? Yes No Within	Are Vegetation, Soil, or	r Hydrology	naturally pro	blematic? No (If n	eeded, explain any answers in Remarks.)
Wetland Hydrology Present?   Yes   No     Within a Wetland?   Yes   No     Wetland Hydrology Present?   Yes   No     Within a Wetland?   Yes   No     Wetland Hydrology Present?   Yes   No     Within a Wetland?   Yes   No     Wetland Hydrology Present?   Yes   No     Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   Yes   No   Wetland?   Yes   Yes   No   Wetland?   Yes   Yes   Yes   No   Wetland?   Yes   Yes   Yes   Yes   No   Wetland?   Yes	SUMMARY OF FINDINGS - A	Attach site m	nap showing	sampling point	locations, transects, important features, etc
Wetland Hydrology Present?   Yes   No     Within a Wetland?   Yes   No     Wetland Hydrology Present?   Yes   No     Within a Wetland?   Yes   No     Wetland Hydrology Present?   Yes   No     Within a Wetland?   Yes   No     Wetland Hydrology Present?   Yes   No     Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   No   Wetland?   Yes   Yes   No   Wetland?   Yes   Yes   No   Wetland?   Yes   Yes   Yes   No   Wetland?   Yes   Yes   Yes   Yes   No   Wetland?   Yes	Hydrophytic Vegetation Present?	Yes	No	le the Secondary	4 600
Weten Hydrology Present?  Remarks: Uzzaketan in under dary distributed from clearing green waste frash dimpen  VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: Zowit )  1. Salix lavering fa 2. Status (Plot size: Species? Status (Plot size: Species Acros All Strate: Total Number of Dominant Species (Plot size: Total Number of Dominant Species (Prevalence Index worksheet: Total Number of Dominant Species (Prevalence Index Specie					
Remarks: Uzzutestrin in understary distributed from clearing green waste frost dimpension of plants.  Tree Stratum (Plot size: Zom Y	Wetland Hydrology Present?	Yes	_ No	within a wetta	nur res No
Tree Stratum (Plot size:			olants.		
2.		)	% Cover	Species? Status	
Species Across All Strata:   Common   Species   Specie	1. Salix laevigax	la		Y FACE	That Are OBL, FACW, or FAC: (A)
Percent of Dominant Species That Are OBL, FACW, or FAC:	2				
That Are OBL, FACW, or FAC:	4.				
Total % Cover of: Multiply by:	Sapling/Shrub Stratum (Plot size:	)	75	= Total Cover	
3	1. None				The state of the s
### FACW species	2				
FAC species   x 3 =	3				
FACU species	4				
Herb Stratum (Plot size:	5			nAmilia Mi	
1. Concurre macculature 15 Y FC Column Totals: (A) (B)  2. 3.	Herb Stratum (Plot size: 7,7)	21	-	= Total Cover	
2. 3. Prevalence Index = B/A =	1. Conum maculati	in	15	Y FAC	
Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Woody Vine Stratum (Plot size:)    15					Column Totals(A)(B)
Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Woody Vine Stratum (Plot size:)    15				The state of the s	Prevalence Index = B/A =
6					
Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Bare Ground in Herb Stratum 10 % Cover of Biotic Crust Present? Yes No	5				
8	6				18 <del></del>
Problematic Hydrophytic Vegetation (Explain)	7				Morphological Adaptations (Provide supporting
Woody Vine Stratum (Plot size:)  1	8				
1	Woody Vine Stratum /Blot alza:		15	= Total Cover	Toblemate Hydrophysic vegetation (Explain)
be present, unless disturbed or problematic.  Hydrophytic Vegetation Present?  Yes No					<sup>1</sup> Indicators of hydric soil and wetland hydrology must
% Bare Ground in Herb Stratum					
% Bare Ground in Herb Stratum % Cover of Biotic Crust Present? Yes No	71			= Total Cover	Hydrophytic
We bare credital in the citatain we cover of Blate credit	W Barrier 1	10	and the last of the last		Vegetation
Remarks:	70 Bare Greatia III Field Greatail	- % C	over of Biotic Cru	ist	Present? Yes No
	Demonstrai				

	5.0	34	
0	$\sim$		
-			

Sampling Point: 46

Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type¹ L	oc² Texture Remarks
0-16 104R3/z 9		M sandy Coam
		Janey Count
(6-8) black again	ic layered; buried	
Type: C=Concentration D=Depletion	RM=Reduced Matrix, CS=Covered or Coated Sa	and Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2) Other (Explain in Remarks)
Stratified Layers (A5) (LRR C)  1 cm Muck (A9) (LRR D)	∑ Depleted Matrix (F3)     Redox Dark Surface (F6)	Other (Explain III Remarks)
Depleted Below Dark Surface (A11)		
Thick Dark Surface (A12)	Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)		unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		14
Depth (inches):		Hydric Soil Present? Yes K No
Depth (inches):Remarks:		Hydric Soil Present? Yes K No
Depth (inches):Remarks: YDROLOGY		Hydric Soil Present? Yes K No
Depth (inches):	uired: check all that apply)	
Depth (inches):	The state of the s	Secondary Indicators (2 or more required)
Depth (inches):	Salt Crust (B11)	
Depth (inches):	The state of the s	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)
Depth (inches):	Salt Crust (B11) Biotic Crust (B12)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)XSediment Deposits (B2) (Riverine)
Depth (inches):	<ul><li>Salt Crust (B11)</li><li>Biotic Crust (B12)</li><li>Aquatic Invertebrates (B13)</li><li>Hydrogen Sulfide Odor (C1)</li></ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  X Sediment Deposits (B2) (Riverine)  X Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
Depth (inches):	<ul><li>Salt Crust (B11)</li><li>Biotic Crust (B12)</li><li>Aquatic Invertebrates (B13)</li><li>Hydrogen Sulfide Odor (C1)</li></ul>	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  g Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)
Depth (inches):	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Confit Deposits (B3) (Riverine)  Drainage Patterns (B10)  Grayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)
Depth (inches):	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  GRoots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requirement)  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  Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Confit Deposits (B3) (Riverine)  Drainage Patterns (B10)  Grayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)
Depth (inches):  Primary Indicators (minimum of one requestions):  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 Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi (B7) 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)  GRoots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 Water-Stained Leaves (B9)  Field Observations: Surface Water Present?  Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  GRoots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
Depth (inches):	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches):	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)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required of the property of the propert	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  GRoots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes  Saturation Present?  Yes  Saturation Present?  Yes  Saturation Present?  Yes  Includes capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi (B7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Corift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Grayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
Primary Indicators (minimum of one requestions)  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 Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present?  Yes Saturation Present? Yes Saturation Present? Yes Secribe Recorded Data (stream gauge)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi (B7) Thin Muck Surface (C7) Other (Explain In Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Corift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Grayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes  Saturation Present?  Yes  Saturation Present?  Yes  Saturation Present?  Yes  Includes capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi (B7) Thin Muck Surface (C7) Other (Explain In Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Corift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Grayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
Primary Indicators (minimum of one requirements)  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 Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present?  Ves Saturation Present?  Yes Saturation Present?  Yes Saturation Present?  Yes Secribe Recorded Data (stream gauge)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi (B7) Thin Muck Surface (C7) Other (Explain In Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Corift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Grayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required 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 Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Ves Vater Table Present?  Ves Saturation Present?  Ves Saturation Present?  Ves Sincludes capillary fringe)  Describe Recorded Data (stream gauge)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soi (B7) Thin Muck Surface (C7) Other (Explain In Remarks)  No Depth (inches): No Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Corift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Grayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No

WETLAND DETERMINATION DATA FORM - Arid West Region Project/Site: Lilac Hills Ranch City/County: San Digo /50 Sampling Date: 3/21/12 Sampling Point: Applicant/Owner: Accretive Group Investigator(s): 6- Scheid Section, Township, Range: Landform (hillslope, terrace, etc.): Slope - Sully Local relief (concave, convex, none): Concave Slope (%): 5-102 Subregion (LRR): LRR-C Plat: Datum: Soil Map Unit Name: 5 teas Gulled Land NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: Native vegetation in drainage cleared for agricultural purposes. Dramage used for green waste dumping. VEGETATION - Use scientific names of plants. Dominance Test worksheet: Absolute Dominant Indicator Tree Stratum (Plot size: % Cover Species? Status **Number of Dominant Species** That Are OBL. FACW, or FAC: None Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species (A/B) = Total Cover That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: 30 m 2 ) 1. Malesma laurina 5 Prevalence Index worksheet: Total % Cover of: Multiply by: **OBL** species x1= **FACW** species FAC species FACU species = Total Cover UPL species Herb Stratum (Plot size: UPL Column Totals: WPL Prevalence Index = B/A = Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤3.01 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) = Total Cover Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Woody Vine Stratum (Plot size: 1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. = Total Cover Hydrophytic Vegetation % Bare Ground in Herb Stratum % Cover of Biotic Crust Present? Remarks:

Sampling Point:

Depth	Matrix		eded to document the indic Redox Feature			and the second		
(inches)	Color (moist)			Type Loc2	Texture	Rema	arks	
0-1811	104R3/3	100				Con		
010	1011-13	- 100			Sande	cecun		
						-		
			Matrix, CS=Covered or Coated Sa		ocation: PL=Pore Lin			
		cable to all LRR	ts, unless otherwise noted.	)		Problematic Hydri	c Soils*:	
Histosol			Sandy Redox (S5)			(A9) (LRR C)		
	pipedon (A2)		Stripped Matrix (S6)			(A10) (LRR B)		
Black Histic (A3)			Loamy Mucky Minera	THE P. LEWIS CO., LANSING MICH.	Reduced V			
	en Sulfide (A4)		Loamy Gleyed Matrix			Material (TF2)		
	d Layers (A5) (LRR	C)	Depleted Matrix (F3)		Other (Expl	ain in Remarks)		
	Jck (A9) (LRR D)		Redox Dark Surface					
and the second second	d Below Dark Surfa	ce (A11)	Depleted Dark Surfa	The second secon	31		5 553	
	ark Surface (A12)		Redox Depressions	(F8)	The state of the s	cators of hydrophytic vegetation and etland hydrology must be present,		
	Mucky Mineral (S1) Gleyed Matrix (S4)		Vernal Pools (F9)			bed or problematic		
					uniess dista	bed of problematic		
	Layer (if present):							
Type:								
Depth (incl	hes):	Depth (inches):				Hydric Soil Present? Yes No X		
Remarks:	is hydric	solina	dicators observ		Hydric Soil Presen	. 163		
		solina	dicators observ		Hydric Soll Presen	. 165		
HYDROLOG	GY.		dicators observ					
HYDROLOG Wetland Hy	GY rdrology Indicators	s:			Second	ary Indicators (2 c	or more required	
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Project/Site: Lilac Hi	115 Kana	h	City/County: Sa	~ Duzg /SD Sam	pling Date: 3/21/1
Applicant/Owner: According	Je Group			State: Sam	pling Point: 48 @
Investigator(s): 6.5 cheic	0		Section, Township	o, Range:	
Landform (hillslope, terrace, etc.): U		m-Suc	De Local relief (conca	ave, convex, none): Concar	Slope (%): Z-5
Subregion (LRR): LRR-Z	J	Lat:	3	Long:	Datum:
Soil Map Unit Name: Stoop	(- 00.06.	1	d	NWI classification:	W. C.
Are climatic / hydrologic conditions or				No (If no, explain in Rem	arks.)
	, or Hydrology		ficantly disturbed?		- ^
	, or Hydrology		ally problematic?		The second secon
SUMMARY OF FINDINGS - Atta	ach site map sh	nowing sa	mpling point locati	ons, transects, important fea	tures, etc.
Hydrophytic Vegetation Present?	Yes	No 🗸			
Hydric Soil Present?	Yes	No ×	Is the Sampl	Yes	No ×
Wetland Hydrology Present?	Yes	No >	within a Wet	andr	
Remarks: Vege fation dumping	cleared	for a	gricultura	D purposes; gre	en waste
VEGETATION – Use scientific r	names of plants	The state of the s			
Tree Stratum (Plot size: 20	m Z 1	Absolute % Cover	Dominant Indicate Species? Status	2	
1. Queveus ago,	-00	2	Y UPL	—   Number of Dominant Species	
2.	,000a				
3.				Total Number of Dominant Species Across All Strata:	<b>5</b> (B)
4.					
	70 7	2	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC	: (A/B)
Sapling/Shrub Stratum (Plot size:		40	Y UM	Prevalence Index workshee	
1. Malosma lau		2	Pun	The first of the second	Multiply by:
The contract of the	/		Y, UPL	The later than the same of the	x 1 =
The man in the	mars	10	UPL	FACW species	x 2 =
5.			- 37	FAC species	x 3 =
**		87	= Total Cover	FACU species	x 4 =
Herb Stratum (Plot size:	j			UPL species 100	x5= 500
1. george				Column Totals: 100	(A) 500 (B)
2.				Prevalence Index = B/	
3				— Prevalence Index = B/	A =
4.				Hydrophytic Vegetation Ind	icators:
5.				Dominance Test is >50	%
6.				Prevalence Index is ≤3.	O <sup>1</sup>
7.				Morphological Adaptati	ons1 (Provide supporting
8.				data in Remarks or	on a separate sheet)
VIII TO A STATE OF THE STATE OF			= Total Cover	Problematic Hydrophyti	c Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:	)				
1. March macro car	pa	Y	TO UPC	Indicators of hydric soil and be present, unless disturbed	wetland hydrology must
2.				be present, unless disturbed	or problematic.
	1.3	20	= Total Cover	Hydrophytic	
and the contract of the con-	6 % Co	ver of Biotic	Crust	Vegetation Present? Yes	No V
% Bare Ground in Herb Stratum		A COMPANY OF THE PARTY OF	10 A 0 0 0	1400 O 1400	
% Bare Ground in Herb Stratum					
% Bare Ground in Herb Stratum/ Remarks:					

Sampling Point: 48

Texture Remarks  Coasse Sondy Coan
Coasse sondy Coun
<sup>2</sup> Location: PL=Pore Lining, RC=Root Channel, M=Matrix, Indicators for Problematic Hydric Soils³:1 cm Muck (A9) (LRR C)
2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Hydric Soil Present? Yes No
Secondary Indicators (2 or more require
Secondary Indicators (2 or more require Water Marks (B1) (Riverine)
The last was first transfer transfer transfer to the contract of the contract

# **ATTACHMENT 13**

Addendum Letter
(Sight Distance Biology Survey for covey
Lane and West Lilac Road)

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1927 Fifth Avenue San Diego, CA 92101 P 619.308.9333 F 619.308.9334

2033 East Grant Road Tucson, AZ 85719 P 520.325.9977 F 520.293.3051 www.reconenvironmental.com

2027 Preisker Lane, Ste. G Santa Maria, CA 93454 P 619.308.9333 F 619.308.9334



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.

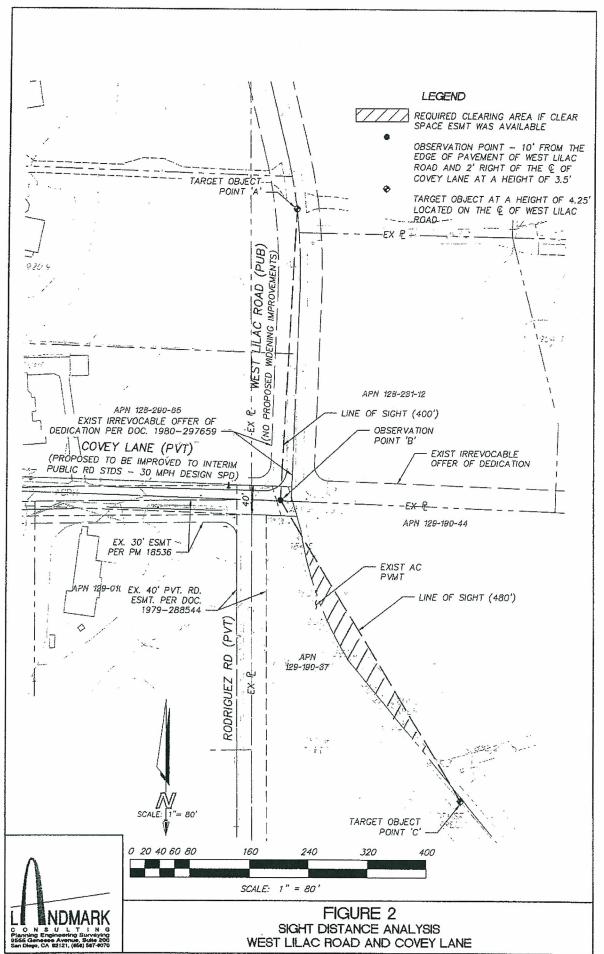
Sincerely,

Gerry Scheid Senior Biologist

GAS:sh

Enclosure

cc/enc: Jon Rilling, Accretive Investments, Inc.



# ATTACHMENT 14 Biological Open Space Signage and Trails

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# ATTACHMENT 14 RPO Wetland Crossing Findings Analysis

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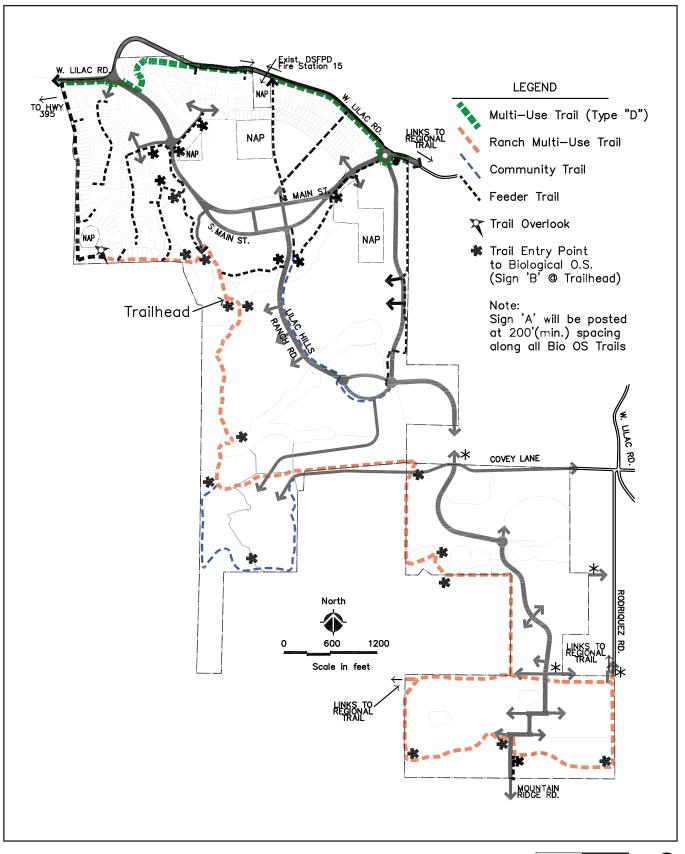
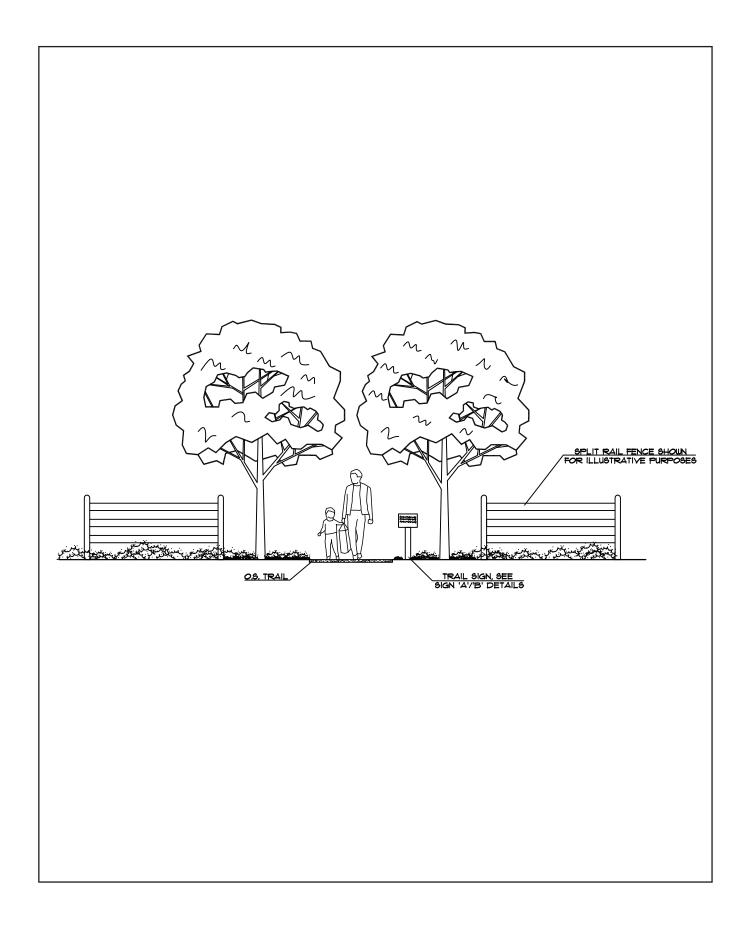


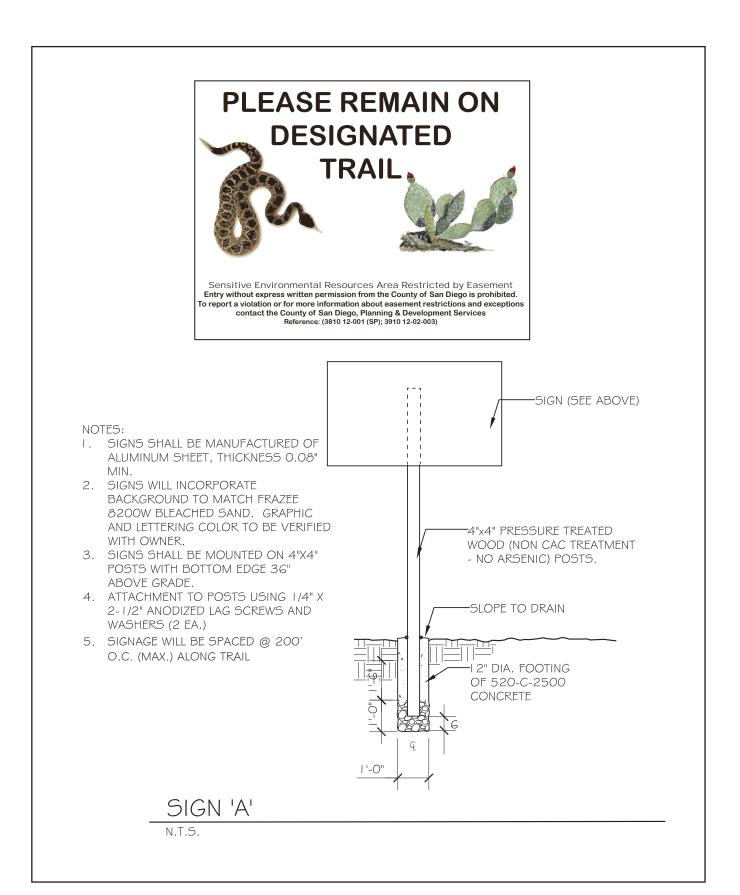




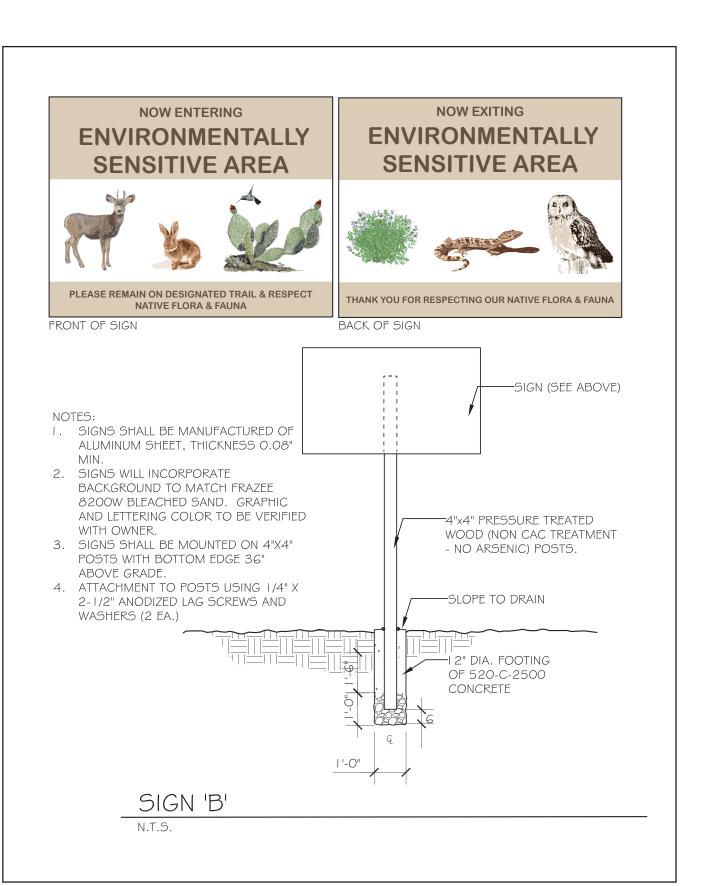
FIGURE 1a

Biological Open Space Trail and Signage Map: Alternative 'A'











# ATTACHMENT 15 RPO Wetland Crossing Findings Analysis

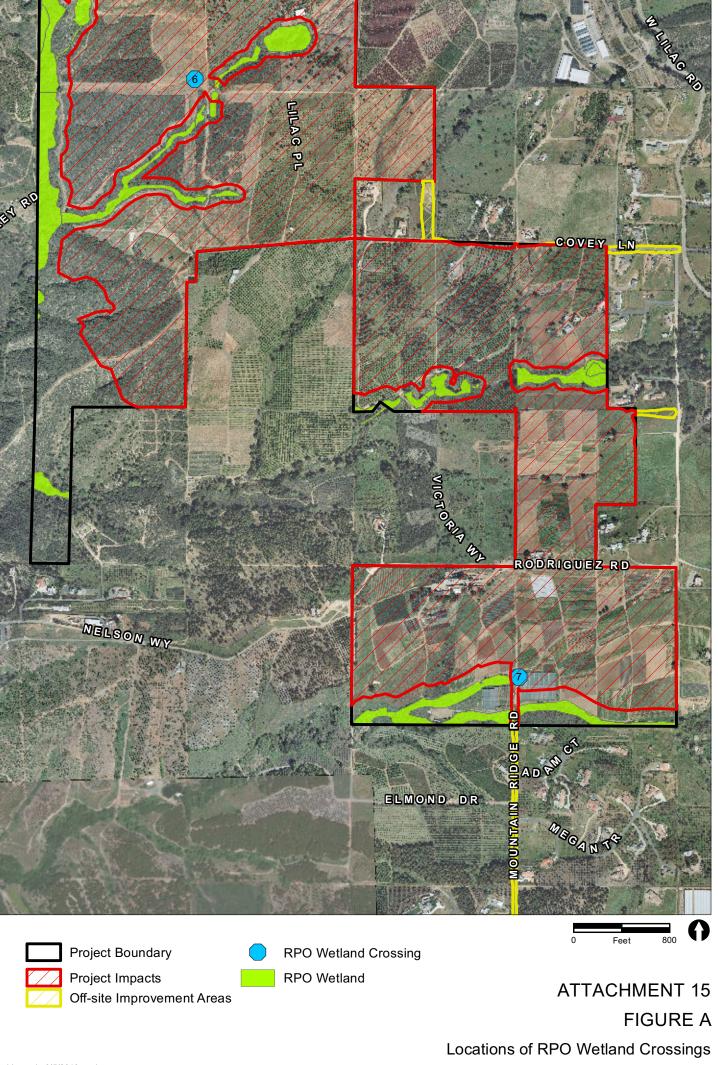
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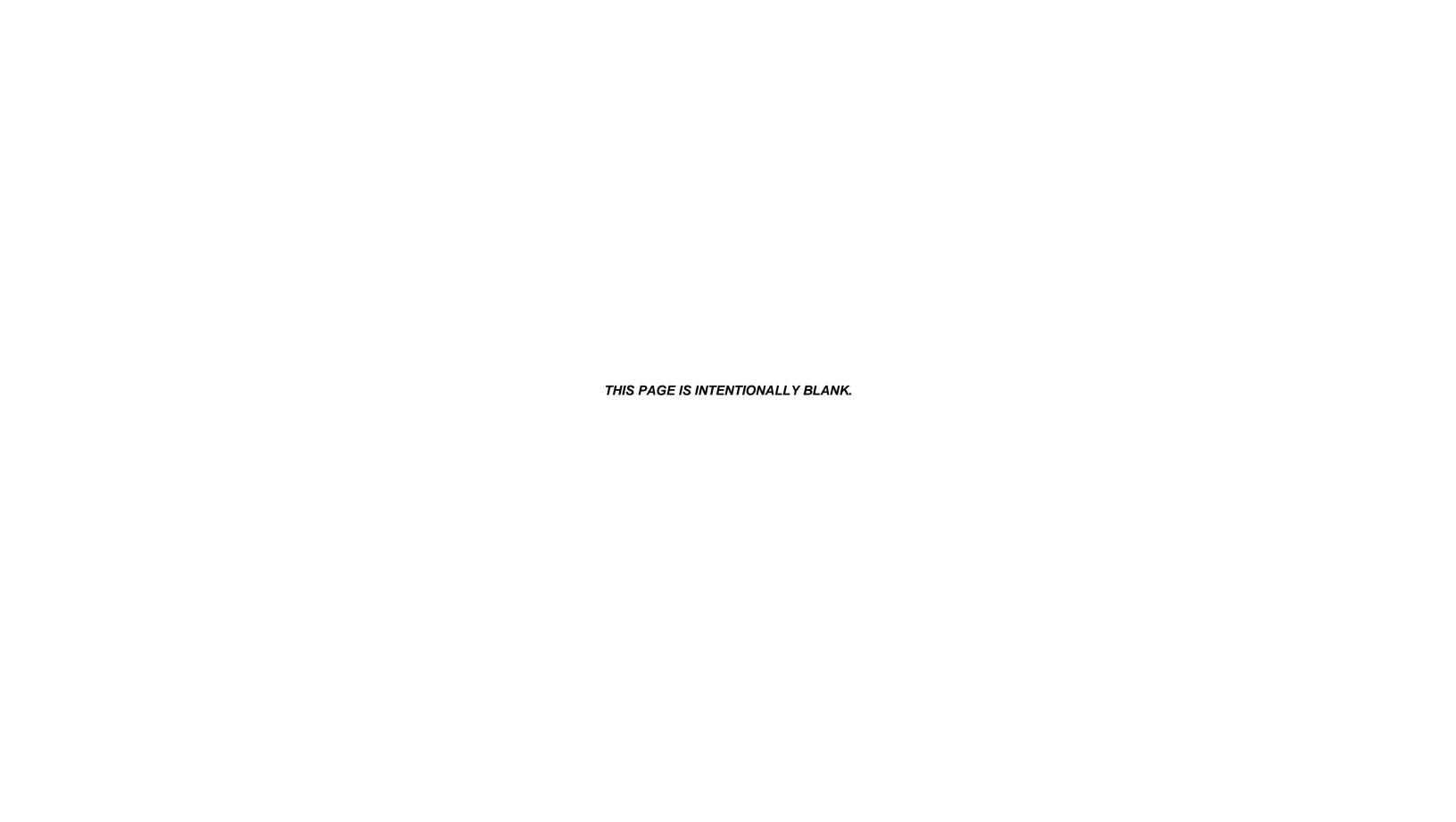
# ATTACHMENT 15 RPO WETLAND CROSSING FINDINGS ANALYSIS (See Attached Figure A for Locations of RPO Wetland Crossings)

RPO Finding There is no feasible alternative that avoids the wetland	Crossing 1  West Lilac Road must cross at this location to meet engineering road standards and minimize additional crossing of RPO wetlands.	Crossing 2  This crossing is required to provide secondary access to the development area to meet safety standards.	Crossing 3  This crossing is required to provide access within the development and to eliminate the need for additional crossings of RPO wetlands.	Crossing 4  West Lilac Road must cross at this location to meet engineering road standards and minimize additional crossing of RPO wetlands.	Crossing 5  This crossing is required to provide secondary access to the development area to meet safety standards.	Crossing 6  This crossing is required to provide secondary access to the development area to meet safety standards.	Crossing 7  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 mitigation 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 onsite 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 mitigation 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 onsite 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 mitigation 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 onsite 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 mitigation 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 onsite 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 mitigation 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 onsite 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 mitigation 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 onsite 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 mitigation 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 onsite 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	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.	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.
damaging location, alignment, or non-structural alternatives that would meet project objectives	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.	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 onsite 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 onsite 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.





# 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

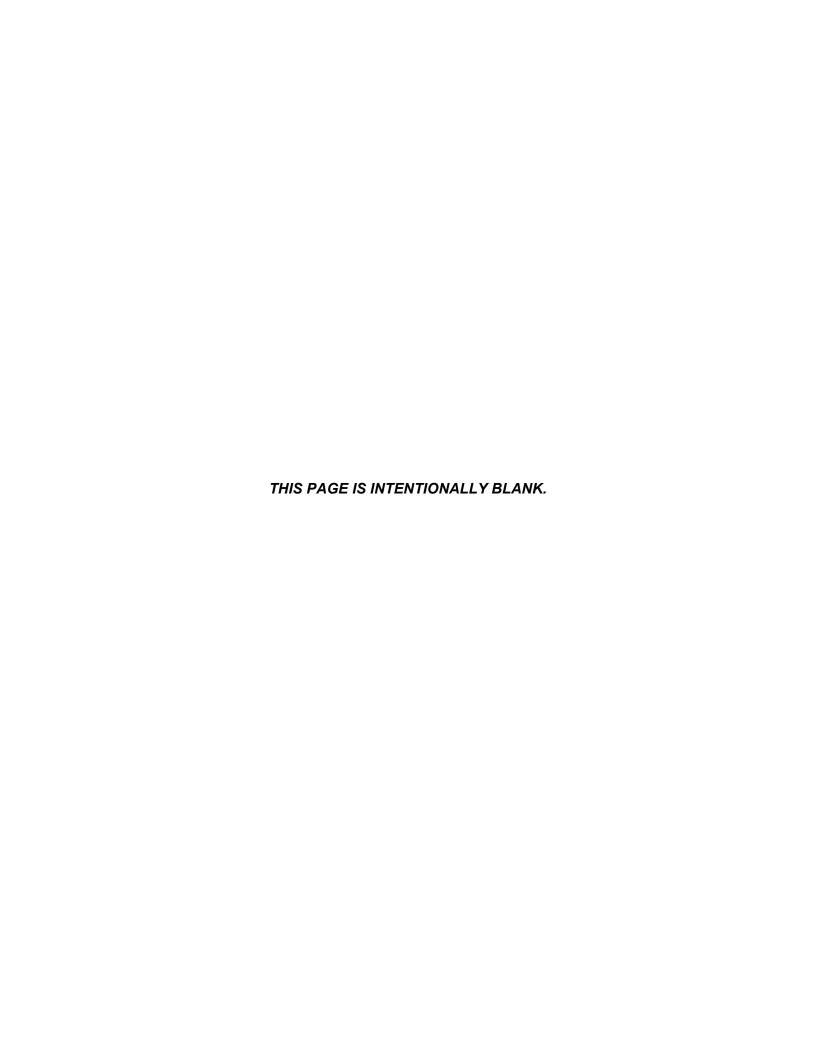
PREPARER:

GERRY SCHEID

COUNTY-APPROVED BIOLOGIST

RECON ENVIRONMENTAL, INC. 1927 FIFTH AVENUE SAN DIEGO, CA 92101 619-308-9333

MAY 23, 2013



## **TABLE OF CONTENTS**

СНА	PIER 1.0	SITE FOR WHICH COMPENSATORY MITIGATION IS REQUIRED	<b>)</b> 1		
1.1	Responsil	ole Parties	1		
1.2	Location o	of the Development Project	1		
1.3	Summary	of Overall Development Project with Proposed Mitigation	4		
		viromental Setting and Site Conditions pject Impacts Resulting in Revegetation Requirement	4 11		
СНА	PTER 2.0	GOALS OF THE COMPENSATORY MITIGATION PROJECT	12		
2.1	Responsil	<u>pilities</u>	12		
	2.1.2 Ins 2.1.3 Rev	oject Designer tallation Contractor vegetation Monitor vegetation Maintenance Contractor	12 12 13 13		
2.2		nd Area(s) of Habitat to be Established, Revegetated, Restored, and/or Preserved	13		
		vegetation Design Concept ency Coordination	13 14		
2.3	<b>Functions</b>	and Values	14		
2.4	Time Laps	<u>se</u>	15		
2.5	Cost		15		
СНА	PTER 3.0	DESCRIPTION OF THE PROPOSED COMPENSATORY MITIGATION SITE	15		
3.1	Site Selec	<u>tion</u>	15		
	3.1.2 Bid 3.1.3 Log	ysical Factors logical Factors gistical Factors torical Factors	15 16 16 16		
3.2	Location a	and Size of Compensatory Mitigation Site	16		
3.3	Functions	and Values	17		
3.4	Jurisdiction	onal Delineation	17		
3.5	Present a	nd Proposed Uses	17		
3.6	References Site(s)				

СНА	PTER 4.0	IMPLEMENTATION PLAN FOR THE COMPENSATORY MITIGATION SITE	19
4.1	Rationale	for Expecting Implementation Success	19
4.2	'	Assurances	19
		ASSUTUTIOES	19
4.3	Schedule		
4.4	Site Prepa	<u>iration</u>	20
4.5	Planting F	<u>Plan</u>	22
4.6	<u>Irrigation</u>	<u>Plan</u>	22
СНА	PTER 5.0	MAINTENANCE DURING MONITORING	23
5.1	<u>Maintenar</u>	nce Activities	23
		pplemental Irrigation	23
	-	ed Control tive Plant Replacement	23 23
		getation Clearing and Trash Removal	24
	5.1.5 Pe	st Control	24
5.2	<u>Schedule</u>		24
СНА	PTER 6.0	MONITORING PLAN FOR THE COMPENSATORY MITIGATION	
		SITE	24
6.1	<u>Performar</u>	nce Standards for Target Dates and Success Criteria	24
6.2	Target Fu	nctions and Values	25
6.3	Target Hy	drologic Regime	25
6.4	Target Ac	<u>reages</u>	25
6.5	Monitorin	g Methods	26
		alitative Monitoring	26
	6.5.2 Qu	antitative Monitoring	26
6.6	<u>Monitorin</u>	g Schedule	26
6.7	<u>Monitorin</u>	g Reports	27
СНА	PTER 7.0	COMPLETION OF COMPERNSATORY MITIGATION	27
СНА	PTER 8.0	CONTINGENCY MEASURES	27
8.1	<u>Initiating</u> (	Contingency Procedures	27
8.2	Alternativ	e Locations for Contingency Compensatory Mitigation	28
8.3	<u>Funding</u>		28
СНД	PTFR 9.0	REFERENCES CITED	28

## **FIGURES**

1: 2: 3: 4a: 4b: 5:	Regional Location Project Location on USGS Map Project Location on Aerial Photograph Vegetation Communities/Land Cover Types within Biological Open Space and Location of Wetland Mitigation Vegetation Communities/Land Cover Types within Biological Open Space and Location of Wetland Mitigation Biological Open Space Trail and Signage Map	2 3 5 7 9 18
TABLI	ES	
1: 2:	Existing On-Site Habitat/Vegetation Communities Summary of Direct Impacts to Jurisdictional Waters within the Project Area	4 11
3: 4:	Summary of Wetland Impacts and Mitigation Wetland Creation Area Container Stock Southern Willow Riparian Habitat Species and Densities per Acre	14 21
5:	Restoration/Enhancement Area Container Stock Southern Coast Live Oak Riparian Woodland Species and Densities per Acre	22
6:	Five-Year Maintenance Schedule	24
7:	Five-Year Success Criteria/Performance Standards for Wetland Creation and Restoration/Enhancement Areas	25
8:	Five-Year Monitoring Schedule	27



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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.

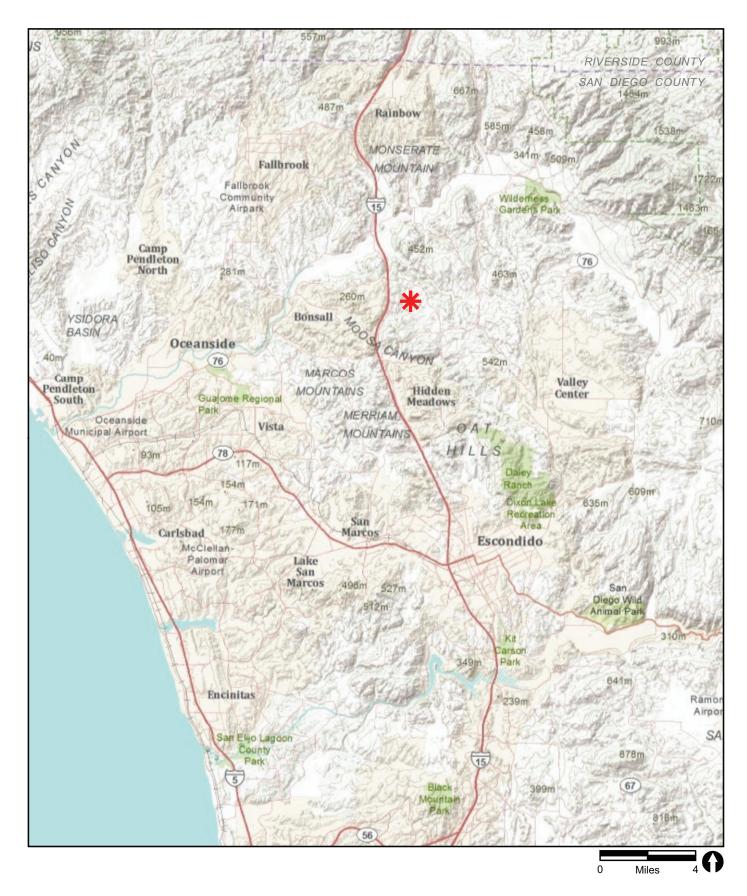
## 1.1 Responsible Parties

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.

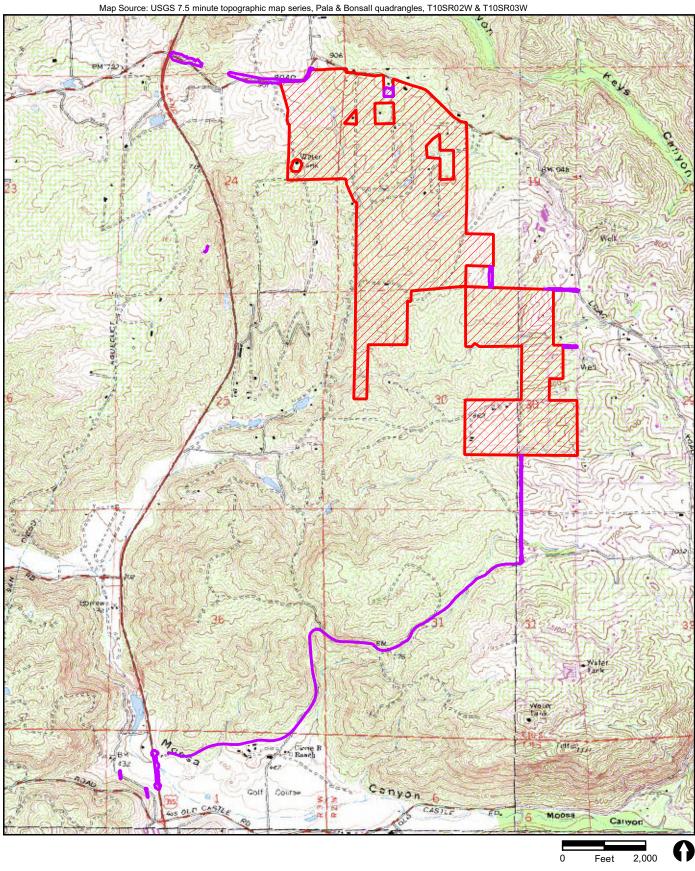
## 1.2 Location of the Development Project

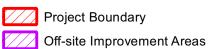
The proposed Lilac Hills Ranch project area is approximately 608 acres composed of 59 contiguous properties and is located in northern unincorporated San Diego County (Location: Thomas Guide 1049 A7, B7; 1069 B1, B2, C1, C2; Figures 1 and 2). The











project 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

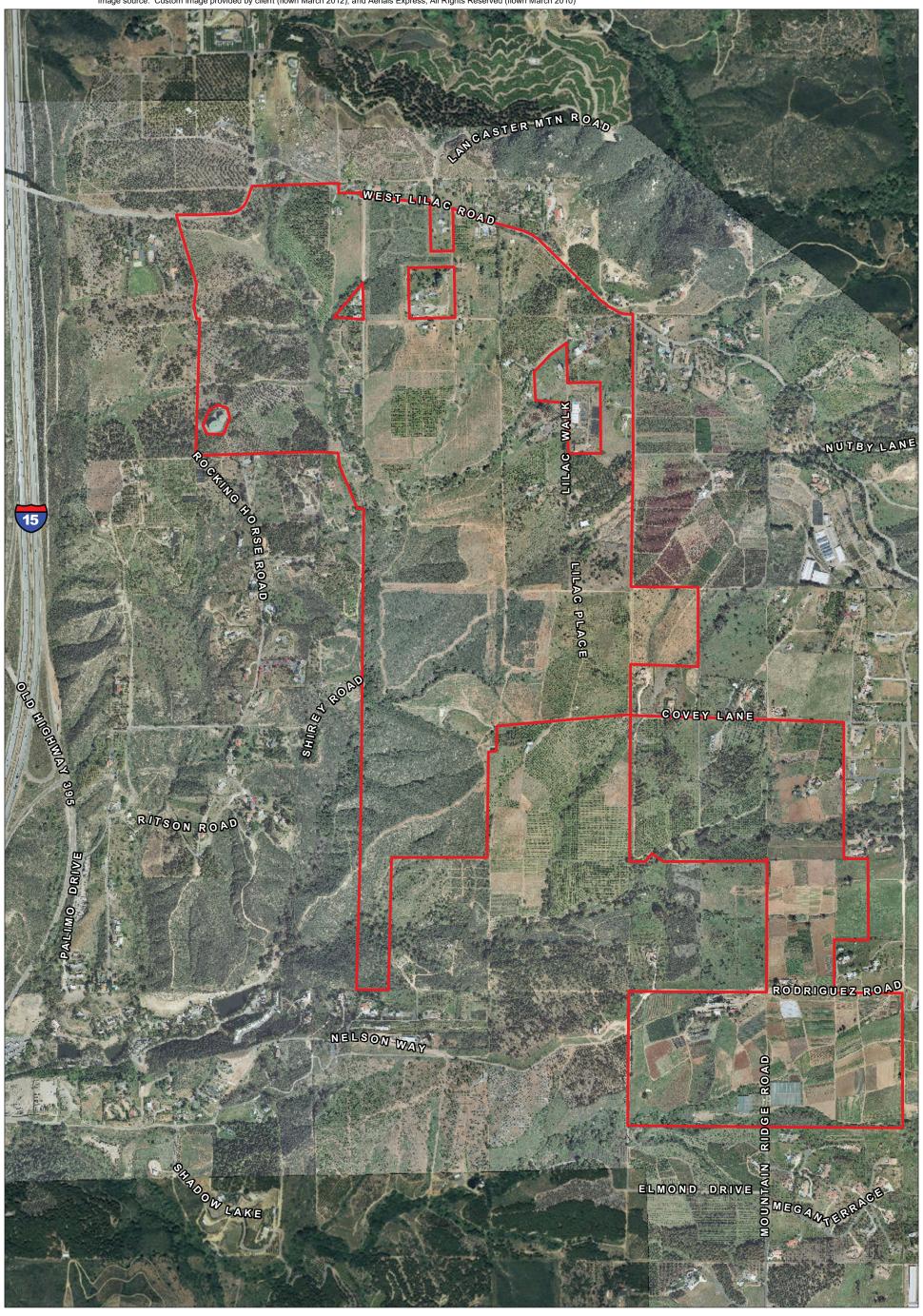
## 1.3.1 Environmental Setting and Site Conditions

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

Habitath/anatation Communities	A
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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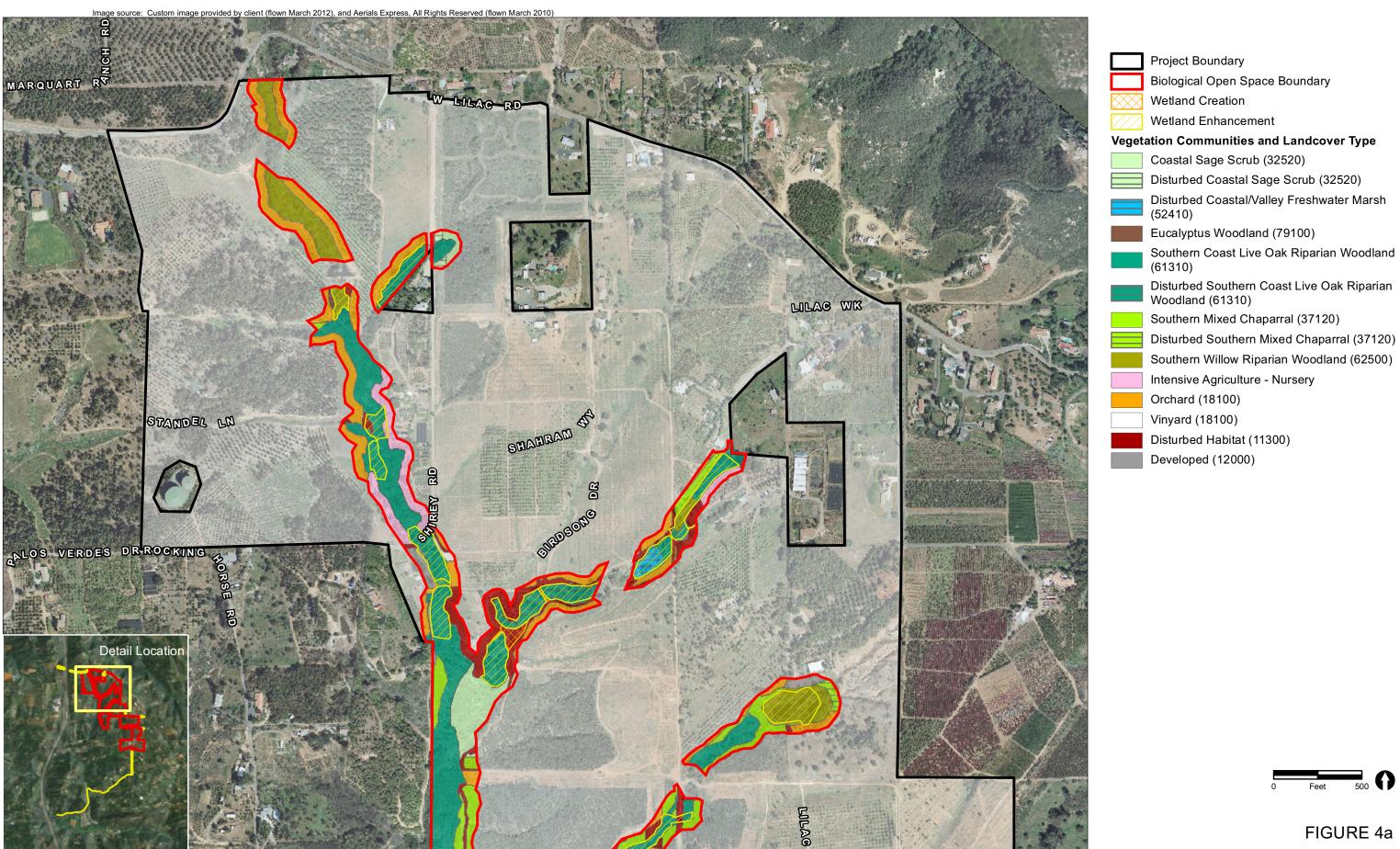


FIGURE 4a

Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation THIS PAGE IS INTENTIONALLY BLANK.

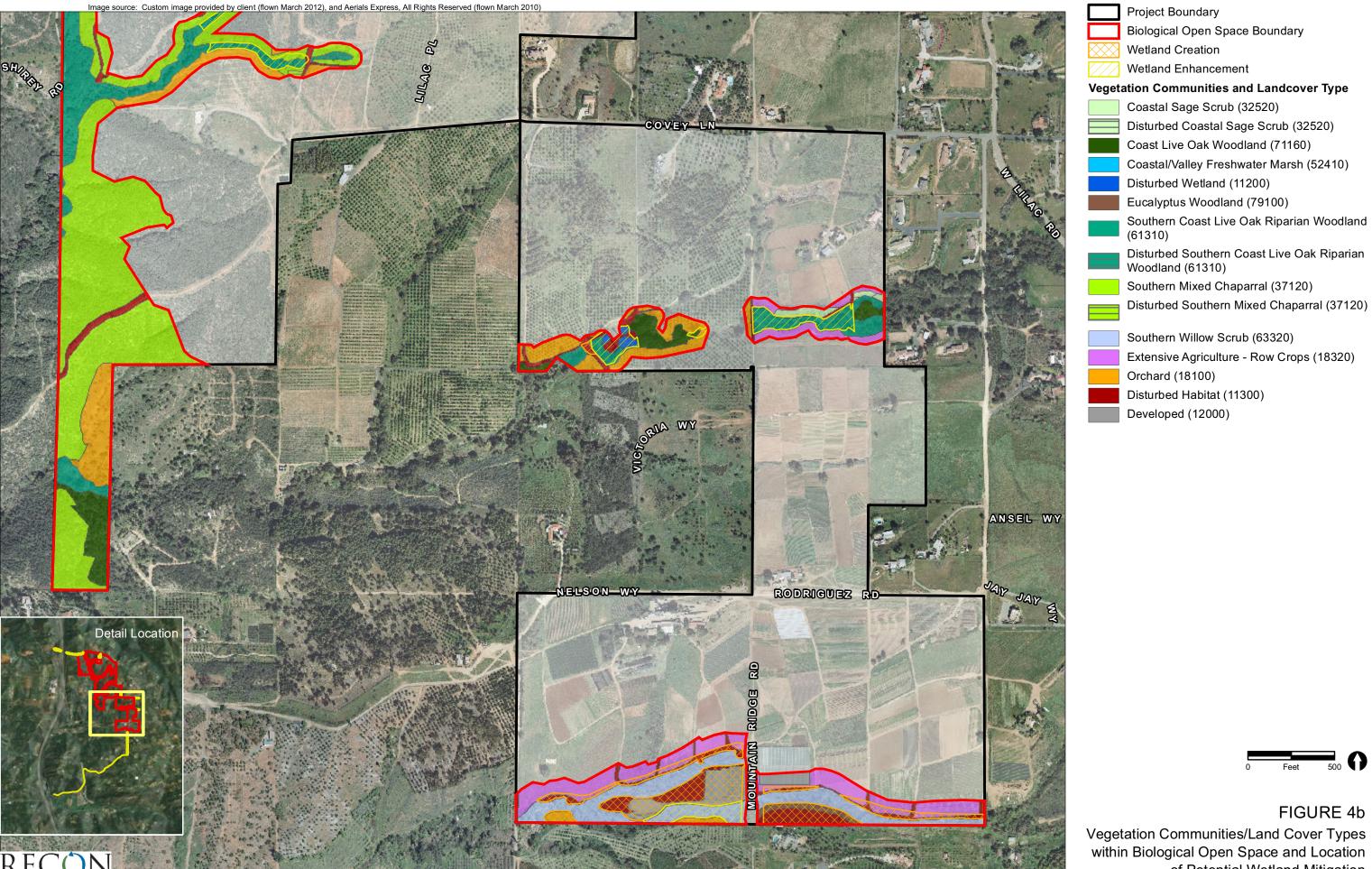


FIGURE 4b

Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation THIS PAGE IS INTENTIONALLY BLANK.

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)

			Offsite
	Existing	Impacts	Impacts
Jurisdictional Waters	(acres)	(acres)	(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 <sup>1</sup>	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 <u>Type(s) and Area(s) of Habitat to be Established, Revegetated, Restored, Enhanced, and/or Preserved</u>

#### 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

		lasa sat	N 4:4: 4:	Total Mitigation
		Impact	Mitigation	Requirement
Vegetation Community	Agency Jurisdiction	(acres)	Ratio	(acres)
Southern Coast Live Oak	ACOE, CDFG,	1.9	3:1	5.7
Riparian Woodland (61310)	County of San Diego <sup>1</sup>			
Coastal/Valley Freshwater Marsh	ACOE, CDFG,	0.2	3:1	0.6
(52410)	County of San Diego <sup>1</sup>			
Southern Willow Riparian	ACOE, CDFG,	0.5	3:1	1.5
Woodland (62500)	County of San Diego <sup>1</sup>			
Mule Fat Scrub (63310)	ACOE, CDFG,	0.1	3:1	0.3
	County of San Diego <sup>1</sup>			
Southern Willow Scrub (63320)	ACOE, CDFG,	0.6	3:1	1.8
	County of San Diego <sup>1</sup>			
Disturbed Wetland (11200)	ACOE, CDFG,	0.1	3:1	0.3
	County of San Diego <sup>1</sup>			
Non-wetland Waters/Streambed	ACOE, CDFG	3.1	1:1	3.1
TOTAL		6.5		13.3

<sup>&</sup>lt;sup>1</sup>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 <u>Cost</u>

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. Nonnative 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 <u>Jurisdictional Delineation</u>

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

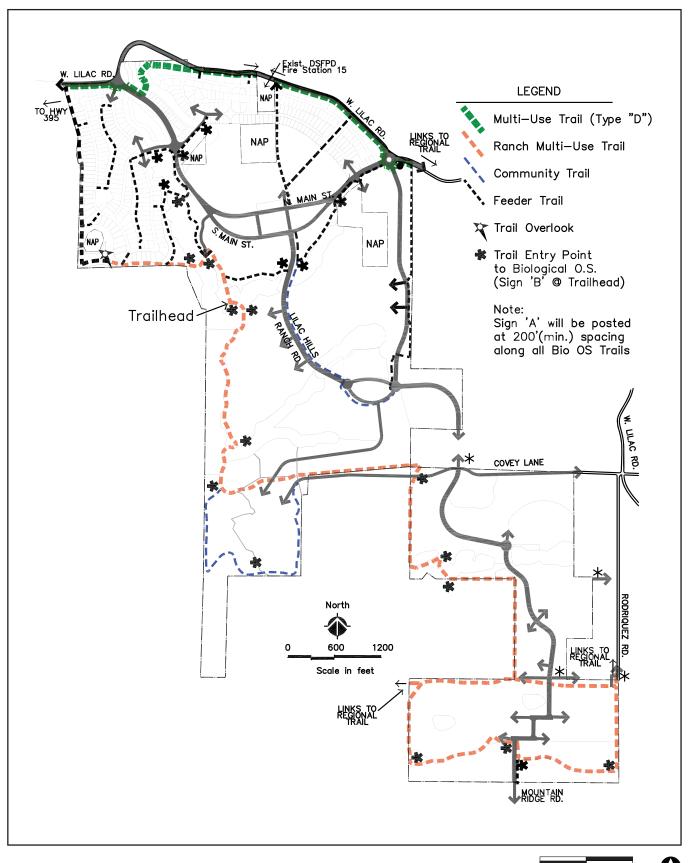




FIGURE 5
Biological Open Space Plan

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 preemergent 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	1-gallon	25
Mugwort		
Baccharis salicifolia	1-gallon	100
Mule fat		
Iva hayesiana	1-gallon	50
San Diego marsh elder		
Oenothera elata ssp. hookeri	1-gallon	25
Hooker's evening primrose		
Rosa californica	1-gallon	25
Wild rose		
Rubus ursinus	1-gallon	25
Wild blackberry		
Salix gooddingii	1-gallon	100
Black willow		
Salix exigua	1-gallon	50
Narrow-leaved willow		
Salix laevigata	1-gallon	75
Red willow		
Salix lasiolepis	1-gallon	150
Arroyo willow		
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 asneeded 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	

<sup>\*</sup>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 <u>Performance Standards for Target Dates and Success Criteria</u>

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 <sup>1</sup>	Diversity <sup>1</sup>	Density <sup>1</sup>
1	80%	_	_	_
2	100%	50%	50%	50%
3	100%	60%	60%	60%
4	100%	75%	70%	70%
5	100%	80%	70%	70%

<sup>&</sup>lt;sup>1</sup>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 <u>Target Hydrologic Regime</u>

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 <u>Monitoring Reports</u>

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.

#### RECON

- 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 RPL3RPL4
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



#### **TABLE OF CONTENTS**

Terr	ns a	nd Acronyms	ii
1.0	Intr	oduction	1
	1.1	Purpose of Conceptual Resource Management Plan	1
		<ul><li>1.1.1 Conditions and/or Mitigation Measures that Require CRMP</li><li>1.1.2 Agency Review and Coordination</li></ul>	2
	1.2	Implementation	2
		<ul> <li>1.2.1 Responsible Parties and Designation of Resource Manager</li> <li>1.2.2 Financial Mechanism</li> <li>1.2.3 Conceptual Cost Estimate</li> <li>1.2.4 Reporting Requirements</li> <li>1.2.5 RMP Agreement</li> <li>1.2.6 Limitations and Constraints</li> </ul>	2 2 2 6 7
2.0	Pro	perty Description	8
	2.1	Legal Description	8
	2.2	Environmental Setting	9
	2.3	Land Use	17
3.0	Bio	logical Resources Description	17
	3.1	Vegetation Communities/Habitats	17
		<ul> <li>3.1.1 Coastal Sage Scrub (32520)</li> <li>3.1.2 Southern Mixed Chaparral (37120)</li> <li>3.1.3 Coast Live Oak Woodland (71160)</li> <li>3.1.4 Eucalyptus Woodland (79100)</li> <li>3.1.5 Disturbed Coastal/Valley Freshwater Marsh (52410)</li> <li>3.1.6 Southern Coast Live Oak Riparian Woodland (61310)</li> <li>3.1.7 Southern Willow Scrub (63320)</li> <li>3.1.8 Mule Fat Scrub (63310)</li> <li>3.1.9 Southern Willow Riparian Woodland (62500)</li> <li>3.1.10 Disturbed Wetland (11200)</li> <li>3.1.11 Disturbed Habitat (11300)</li> <li>3.1.12 Agricultural Areas</li> <li>3.1.13 Developed (12000)</li> </ul>	18 18 23 23 24 24 25 25 26 26 26
	3.2	Plant Species	27
	3.3	Wildlife Species	27

RECON

### **TABLE OF CONTENTS (cont.)**

4.0	Biological Resource Management	28
	4.1 Management Goals	28
	4.2 Biological Management Tasks	28
	4.3 Adaptive Management	29
	4.4 Operations, Maintenance, and Administration Tasks	29
	4.5 Public Use Tasks	29
	4.6 Fire Management Tasks	29
5.0	Cultural Resource Management	29
6.0	References Cited	31
FIGU	JRES	
1: 2: 3: 4: 5a: 5b:	Regional Locations Project Location on USGS Map Soils Project Area in Relation to Draft North County MSCP Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation Vegetation Communities/Land Cover Types within Biological Open Space and Location of Potential Wetland Mitigation	9 10 13 15 19 21
TAB	LES	
1: 2:	Biological Resources Management Tasks Vegetation Communities/Land Cover Types Within Biological Open Space	5 18

ii RECON

# **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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iv RECON

#### 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 20142). 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 <u>105-104.1</u> 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).
- 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 405-104 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)

Page 2 RECON

- 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.

Page 4 RECON

# TABLE 1 BIOLOGICAL RESOURCES MANAGEMENT TASKS

Check		Frequency	Hours Required
if applies	Tasks	(times per year)	per Year
Biological		(unics per year)	per rear
X	Baseline inventory of resources	One time	40 hrs.
Λ	(if original inventory is over 5 years old)	One time	40 1113.
X	Update biological mapping	Once every 5 years	24 hrs.
	Update aerial photography	Once every xx years	241113.
X	Removal of invasive species	Monthly/First Year	First year:
Λ	Tremoval of invasive species	Quarterly/Next 10 years Annually/After 10 years	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	Monthly/Quarterly	40 hrs. / 160
	Management		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	s, Maintenance, and Administration Tasks		
X	Establish and maintain database and	Annually	20 hrs.
	analysis of data		
X X	Write and submit annual report to County	Annually	40 hrs.
	Submit review fees for County review of annual report	Annually	
Х	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	(add frequency)	
	easement holders	(add frequency)	

TABLE 1
BIOLOGICAL RESOURCES MANAGEMENT TASKS

Check		Frequency	Hours Required
if applies	Tasks	(times per year)	per Year
	Manage hydrology (as required)	(add frequency)	
	Coordinate with law enforcement and	(add frequency)	
	emergency services (e.g., fire)		
	Coordinate with adjacent land	(add frequency)	
	managers		
	Remove graffiti and repair vandalism	(add frequency)	
Public Use			
X X	Construct trail(s)	One time	200 hrs.
X	Monitor, maintain/repair trails (unless a	Annually	200 hrs.
	trails easement has been granted to the		
	County)		
X	Control public access	Monthly	200 hrs.
	Provide Ranger patrol	(add frequency)	
	Provide visitor/interpretive services	(add frequency)	
	Manage fishing and/or hunting program	(add frequency)	
	(if one is allowed)		
	Provide Neighbor Education –	(add frequency)	
	Community Partnership		
Χ	Prepare and reproduce trail maps and	Twice per year	40 hrs.
	interpretive materials		
	If HOA is funding management, provide	Annually	
	annual presentation to HOA		
	Coordinate volunteer services	(add frequency)	
	Provide emergency services	(add frequency)	
	access/response planning		
	gement Tasks		
Χ	Coordinate with applicable fire agencies	Annually	20 hrs.
	and access (gate keys, etc.) for these		
	agencies 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 T		(aud irequelicy)	
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.
^	Izebiani airei iiie	Alter Each life Everil	200 HIS.

## 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.

Page 6 RECON

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:

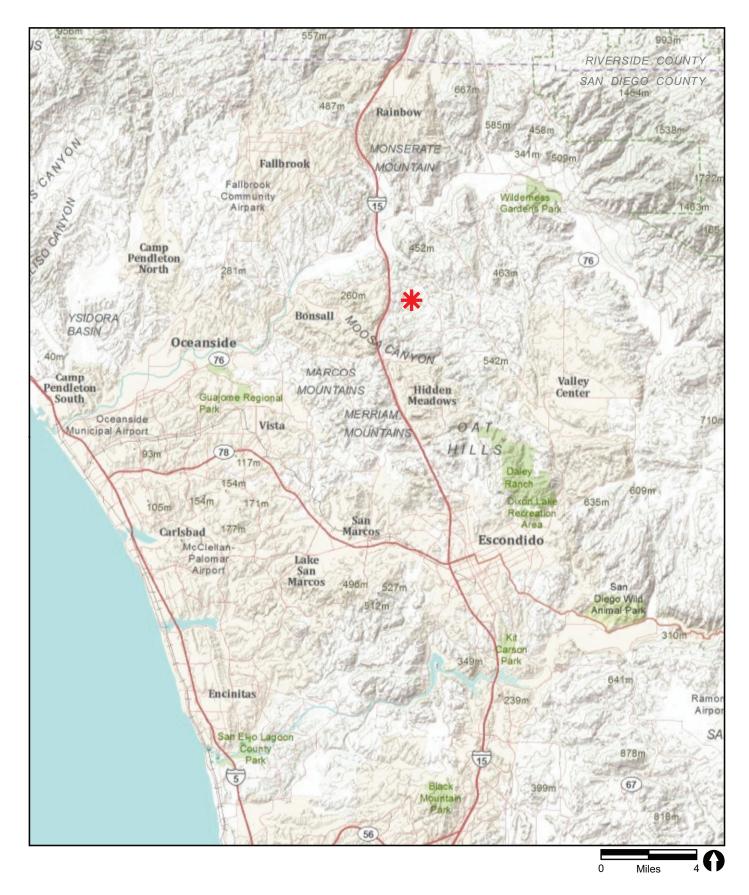
- Environmental factors such as the influence of local water availability (either surface or subsurface waters), introduction or spread of non-native species, presence of threatened or endangered species, fire, flood, drought, erosion, air pollution, and hazardous waste materials.
- Legal, political, 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

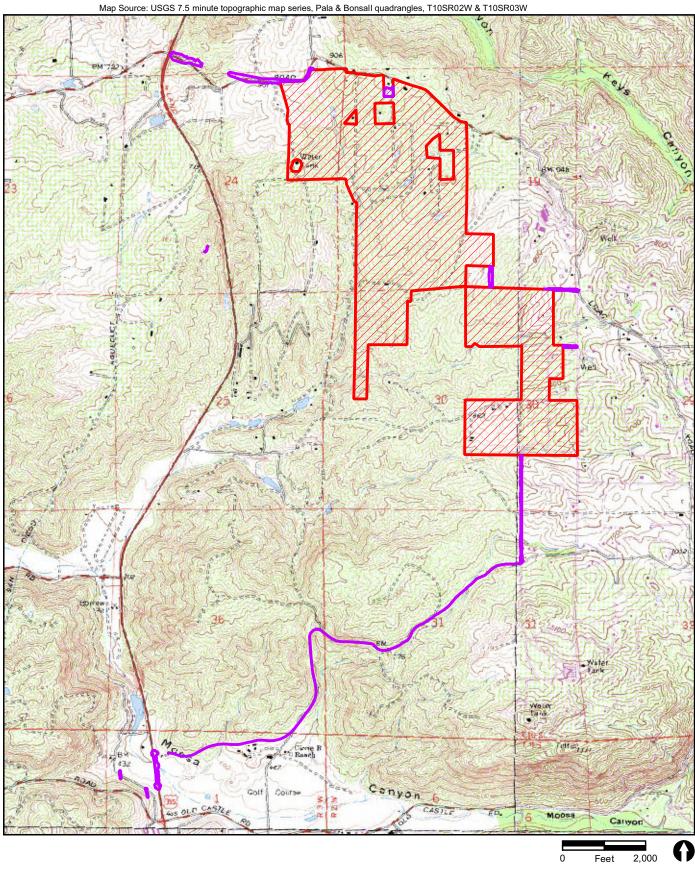
The proposed Lilac Hills Ranch project site is approximately 608 acres composed of 59 contiguous properties and is located in northern unincorporated San Diego County 0.25 mile from the Interstate 15 (I-15) corridor on the east side with freeway access off the Old Highway 395 Interchange (Figure 1). 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).

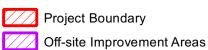
Page 8 RECON











#### 2.2 Environmental Setting

The following information is summarized from the Biological Resource Report for the Lilac Hills Ranch project (RECON 20142). 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.

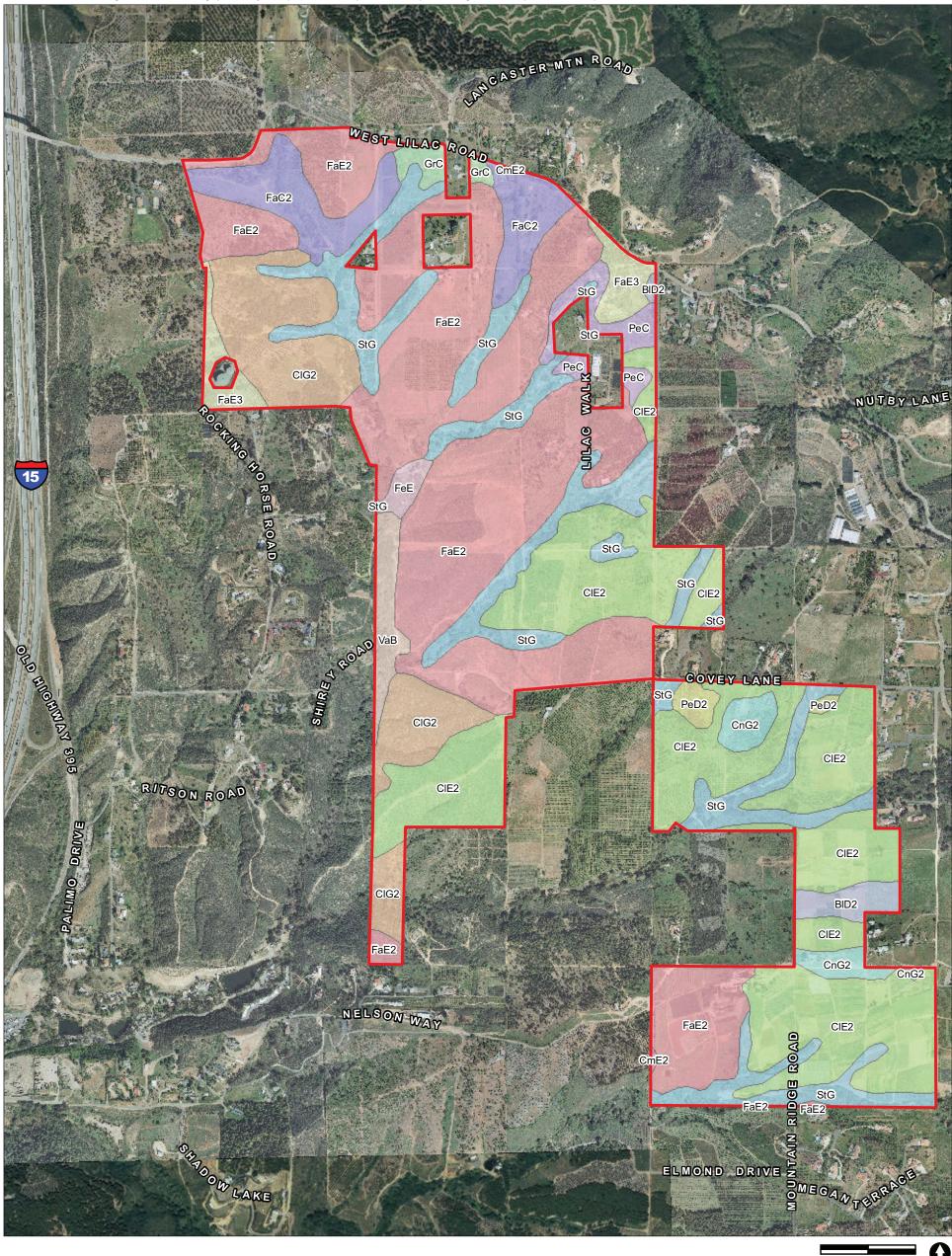
The drainage courses on the site convey storm water and urban/agricultural runoff. Both intermittent and ephemeral drainages occur in the project area. Wells occur in scattered locations across the site and are used to provide water to the orchards, vineyards, and other agricultural areas. Two agricultural 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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Page 12 RECON





#### **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

 $\mbox{PeD2}$  - Placentia sandy loam, 9 to 15 % slopes, eroded

StG - Steep gullied land

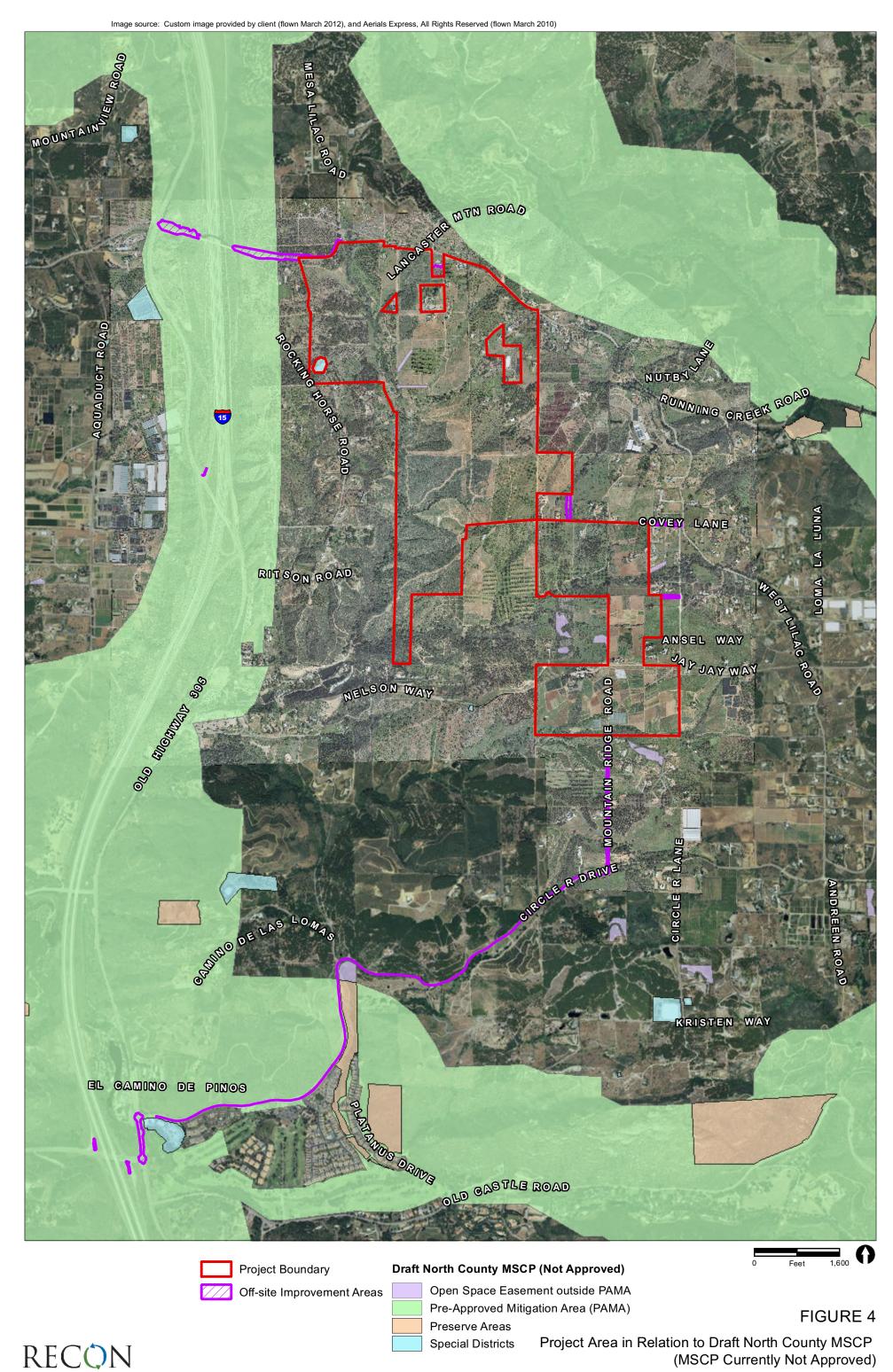
VaB - Visalia sandy loam, 2 to 5% slopes

FIGURE 3



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Page 22



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Page 16 RECQN

#### 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 20142).

#### 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

	Preserved On-site
Habitat/Vegetation Community	(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	<u>6.0</u> <del>5.5</del>
Intensive agriculture – nursery	<u>3.0</u> <del>2.5</del>
Vineyard	0.1
Orchard	<u>15.5<del>15.1</del></u>
Disturbed habitat	9.2
Developed	2.9
TOTAL	<u>104.1</u> <del>102.7</del>

#### **3.1.1 Coastal Sage Scrub (32520)**

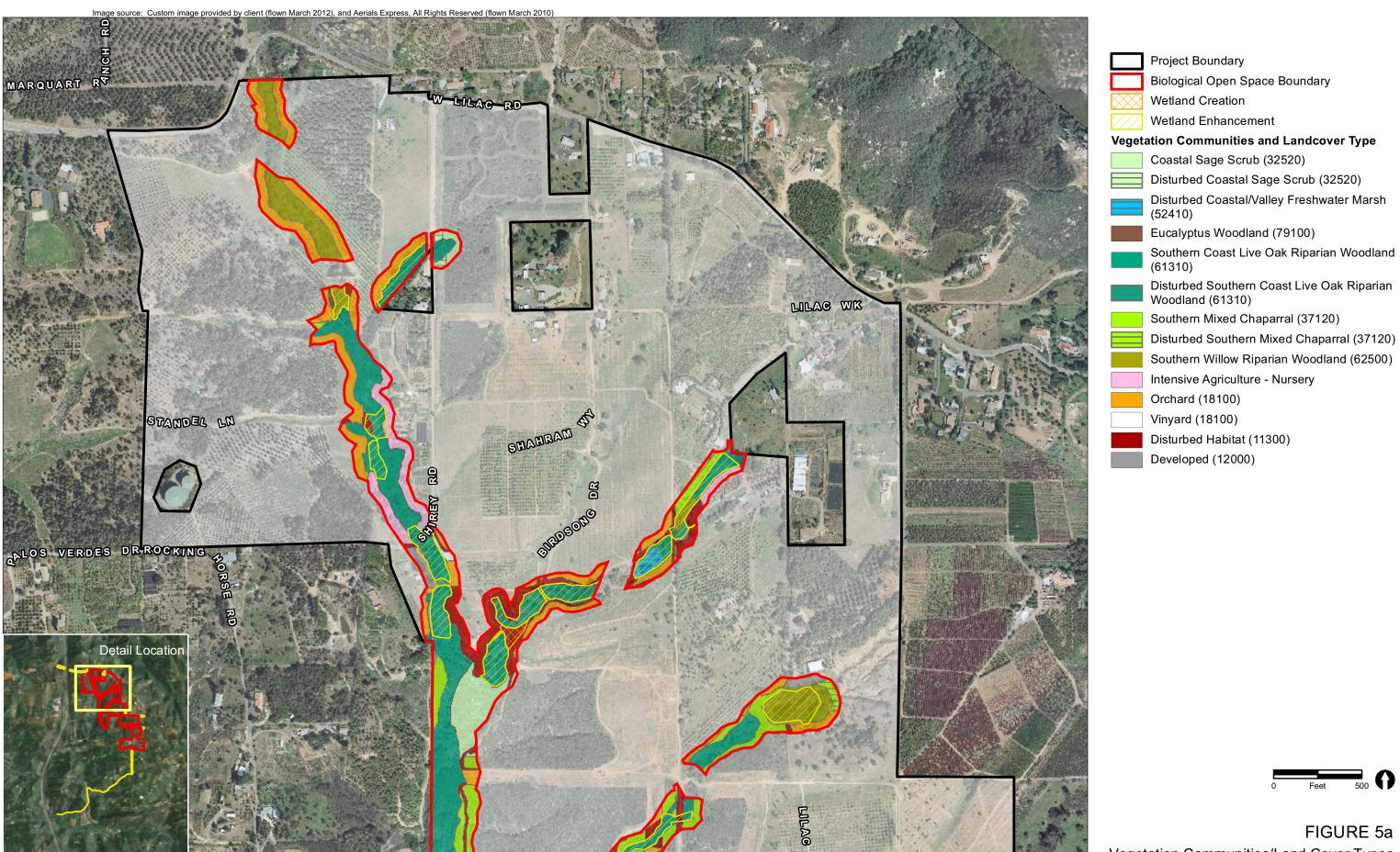
Coastal sage scrub vegetation occurs in two areas within the on-site biological open space. The largest patch of coastal sage scrub occurs in the west central part of the open space area. The second area of coastal sage scrub occurs on the east central portion of the open space adjacent to riparian habitat. 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-

Page 18 RECON



#### FIGURE 5a

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

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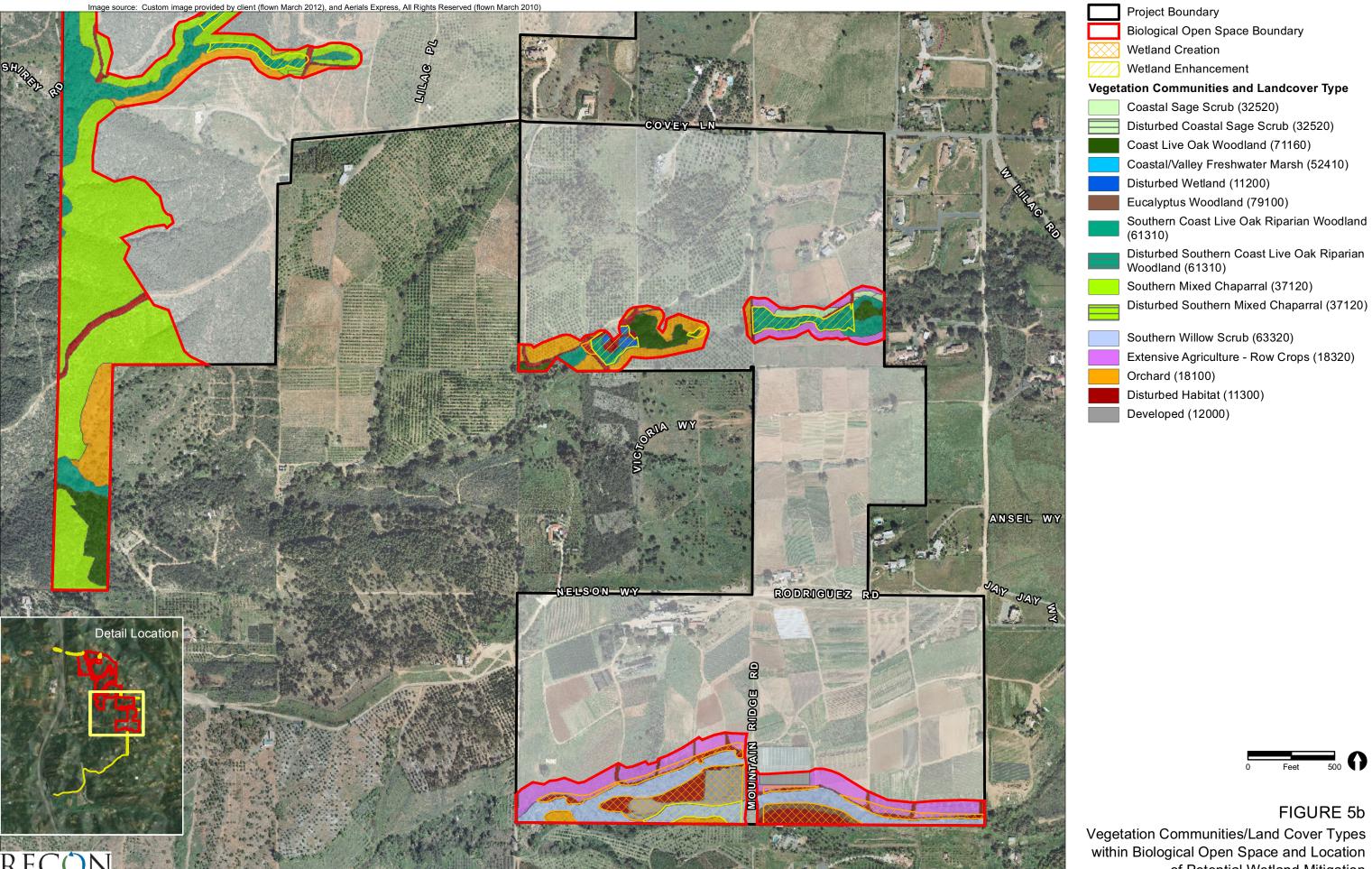


FIGURE 5b

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

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Page 22

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 eastwest 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

Page 24 RECON

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

Page 26 RECON

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.

Page 28 RECON

## 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 20143 technical report Cultural Resources Inventory and Assessment: Lilac Hills Ranch, Escondido, San Diego County, California. Under the proposed project, 104.13.6 acres of the project site (17 percent) will be designated as archaeological and biological open space. TwoOne archaeological sites will be preserved within dedicated open spaceas 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 sSite 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 aA portion of site CA-SDI-18362 was—were determined significant as it—they contains 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.

5.1.12 Goal: Protection of two prehistoric cultural resource sites.

<u>Task 1</u>: One site (CA-SDI-18362) is within open space and is adequately protected by dense vegetation. One site (CA-SDI-20436) is <u>also in open space</u> <u>but not protected by dense vegetation</u>. <u>Natural vegetative barriers will be placed around CA-SDI-20436 to limit access to the site.</u> <u>outside the grading and development footprint of the project.</u>

<u>Task 2</u>: 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.<u>2</u>3 Management Constraints

Management constraints include ensuring that <u>cultural resourceprehistoric</u> 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.

Page 30 RECQN

# 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**

20142 Biological Resources Report for Lilac Hills Ranch.

#### San Diego Association of Governments (SANDAG)

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Conceptual Biological Resources Management Plan for On-Site Biological Open Space for Lilac Hills Ranch

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Page 32 RECON

## **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

RECON ENVIRONMENTAL INC. 1927 FIFTH AVENUE SAN DIEGO, CA 92101 619-308-9333

MAY 23, 2013



#### **TABLE OF CONTENTS**

ıerr	ns a	nd Acr	onyms	1111
1.0	Introduction			
	1.1	Purpo	se of Conceptual Resource Management Plan	1
		1.1.1 1.1.2	Conditions and/or Mitigation Measures that Require CRMP Agency Review and Coordination	2
	1.2	Imple	mentation	2
		1.2.2 1.2.3 1.2.4 1.2.5	Responsible Parties and Designation of Resource Manager (RM) Financial Mechanism Conceptual Cost Estimate Reporting Requirements RMP Agreement Limitations and Constraints	2 4 4 7 7 8
2.0	Pro	perty [	Description	8
	2.1	Legal	Description	8
	2.2	Enviro	onmental Setting	9
	2.3	Land	Use	15
3.0	Bio	logical	Resources Description	15
4.0	Bio	logical	Resource Management	16
	4.1	Manag	gement Goals	16
	4.2	Biolog	gical Management Tasks	19
	4.3	Adapt	ive Management	19
	4.4	Opera	tions, Maintenance, and Administration Tasks	19
	4.5	Public	: Use Tasks	19
	4.6	Fire M	lanagement Tasks	19
5.0	Ref	erence	es Cited	19

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## **TABLE OF CONTENTS (cont.)**

FI	G	U	R	E	S
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1: 2: 3: 4:	Regional Locations Project Location on USGS Map Soils Project Area in Relation to Draft North County MSCP	10 11 13 17
TAB	BLES	
1: 2:	Biological Resources Management Tasks Off-Site Habitat/Vegetation Communities Requirements	5 16

ii RECON

## **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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Conceptual Biological Resources Management Plan for Off-Site Habitat Mitigation for Lilac Hills Ranch

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iv

#### 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:

- 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

Page 2 RECON

- 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.

Page 4 RECON

TABLE 1
BIOLOGICAL RESOURCES MANAGEMENT TASKS

Check if Applies	Tasks	Frequency (Times per Year)	Hours Required per Year
Biological		(Tillies per Tear)	pei i eai
X	Baseline inventory of resources (if original inventory is over 5 years old)	One time	80 hrs
Χ	Update biological mapping.	Once every 5 years	40 hrs
	Update aerial photography.	Once every xx years	
Χ	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)	
Χ	Biological Resource Monitoring	Quarterly	160 hrs
Operations	s, Maintenance, and Administration Tasks		
X	Establish and maintain database and analysis of data.	Annually	40 hrs
Х	Write and submit annual report to County.	Annually	40 hrs
Х	Submit review fees for County review of annual report.	Annually	
Χ	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)	
Χ	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		Frequency	Hours Required
Applies	Tasks	(Times per Year)	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	e 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 Mana	gement Tasks		
Х	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)	

Page 6 RECON

TABLE 1
BIOLOGICAL RESOURCES MANAGEMENT TASKS

Check if Applies	Tasks	Frequency (Times per Year)	Hours Required per Year			
Post-fire T	Post-fire Tasks					
Χ	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

Page 8 RECON

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).

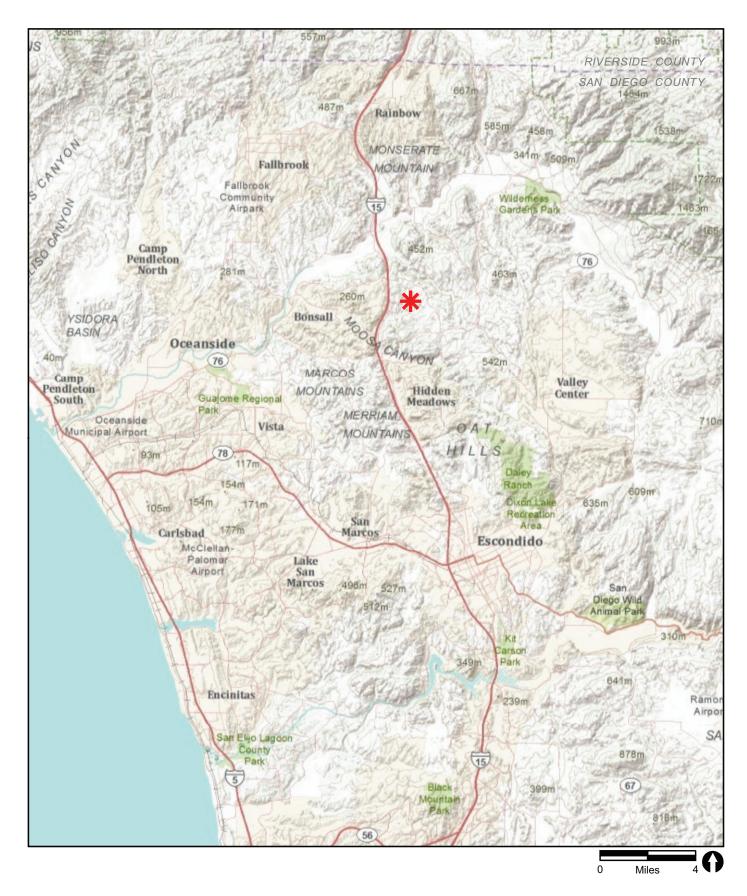
## 2.2 Environmental Setting

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.

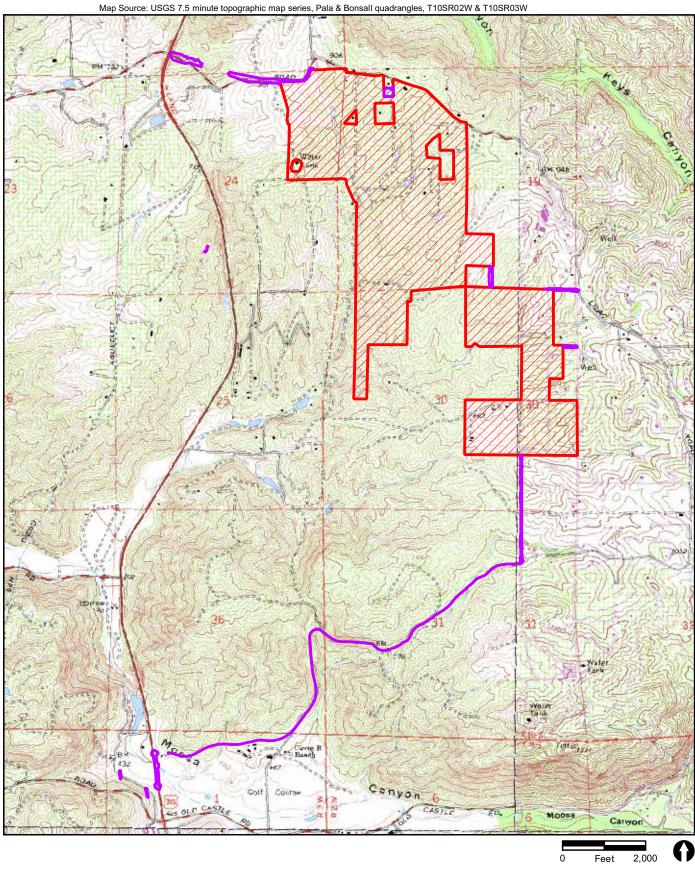
The drainage courses on-site convey storm water and urban/agricultural runoff. Both intermittent and ephemeral drainages occur in the project area. Wells occur in scattered locations across the site and are used to provide water to the orchards, vineyards, and other agricultural areas. Two agricultural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

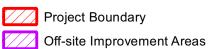
Soil types within the project area and vicinity consist of a series of sandy loam, coarse sandy loam, sand, and steep gullied land (U.S. Department of Agriculture [USDA] 1973; San Diego Association of Governments [SANDAG] 1995). Sandy loam and coarse sandy loam soils in the following soil series are 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.







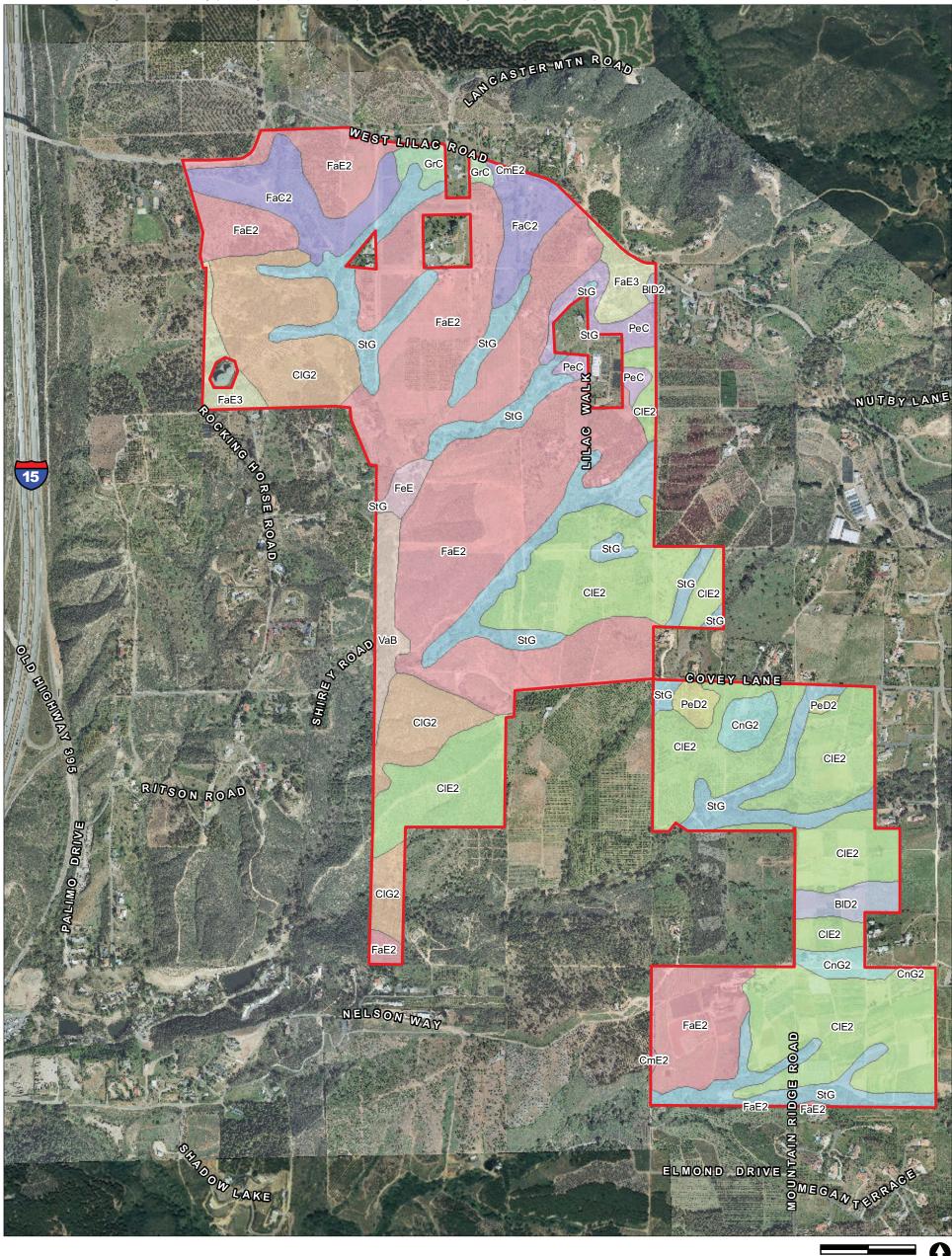




Conceptual Biological Resources Management Plan for Off-Site Habitat Mitigation for Lilac Hills Ranch

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Page 12 RECON





#### **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

 $\mbox{PeD2}$  - Placentia sandy loam, 9 to 15 % slopes, eroded

StG - Steep gullied land

VaB - Visalia sandy loam, 2 to 5% slopes

FIGURE 3



Conceptual Biological Resources Management Plan for Off-Site Habitat Mitigation for Lilac Hills Ranch

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Page 14 RECON

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:

 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.

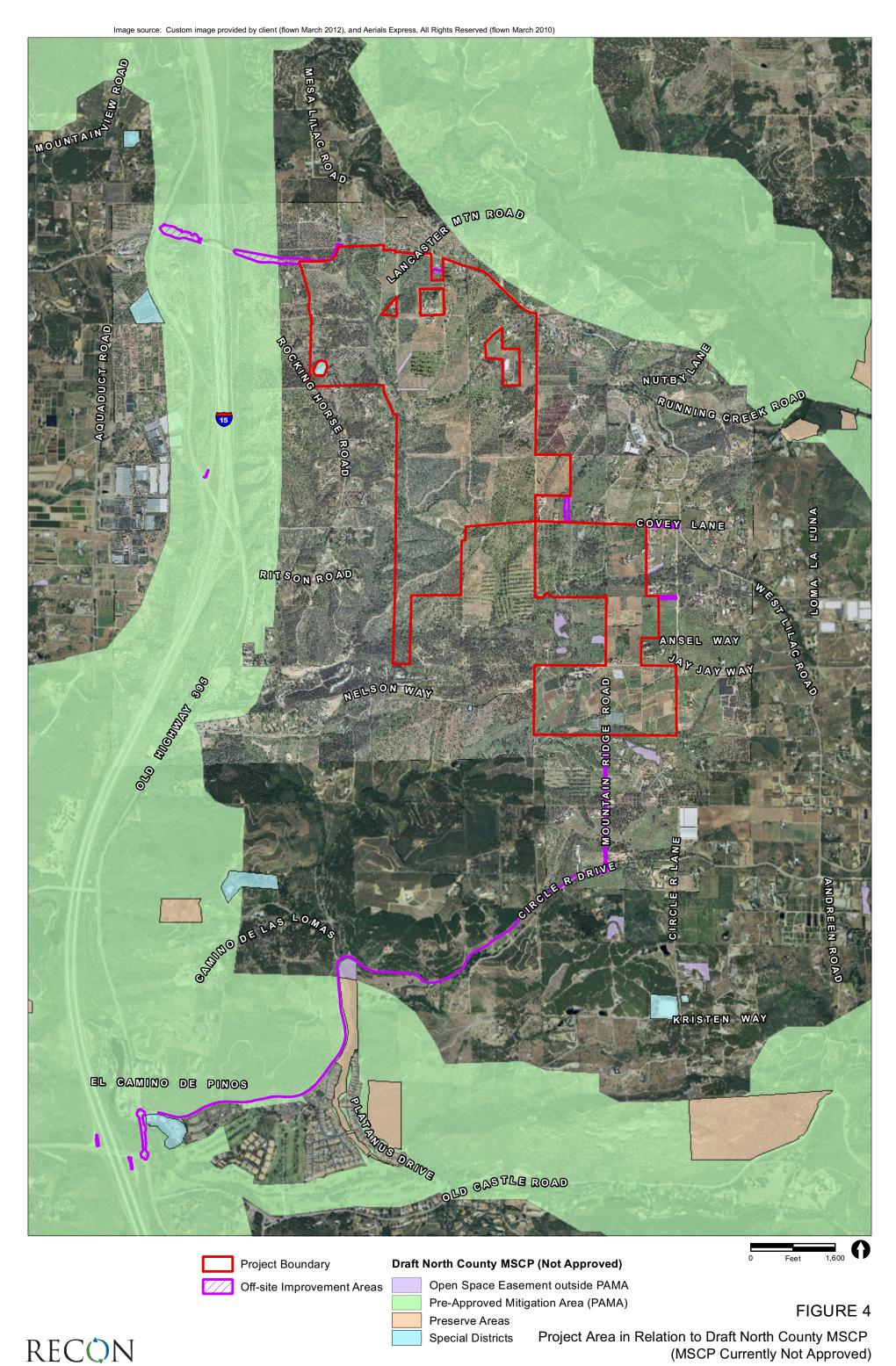
## 4.0 Biological Resource Management

#### 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.

Page 16 RECON



Conceptual Biological Resources Management Plan for Off-Site Habitat Mitigation for Lilac Hills Ranch

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Page 18 RECON

## 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.

Conceptual Biological Resources Management Plan for Off-Site Habitat Mitigation for Lilac Hills Ranch

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Page 20 RECON