



Annual Report for the Otay Ranch Preserve January 1 – December 31, 2012

Prepared for

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LIST OF ACRONYMS

ACOE	U.S. Army Corps of Engineers
APN	Assessor's Parcel Number
BLM	Bureau of Land Management
CACW	California cactus wren
CAGN	Coastal California gnatcatcher
CBI	Conservation Biology Institute
CDFW	California Department of Fish and Wildlife
CNDDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
FUDS	Formerly Used Defense Site
FY	Fiscal Year
IEMM	Institute for Ecological Monitoring and Management
LBV	Least Bell's vireo
MSCP Subregional Plan	Multiple Species Conservation Program County of San Diego Subarea Plan
MSCP Subarea Plan	City of Chula Vista Multiple Species Conservation Program Subarea Plan
POM	Preserve Owner/Manager (City and County)
QCB	Quino checkerspot butterfly
RMP	Otay Ranch Preserve Phase 1 & Phase 2 Resource Management Plans
SanBIOS	San Diego Biological Information and Observation System
SANDAG	San Diego Association of Governments
SCLM	South County Land Manager
SDMMP	San Diego Management and Monitoring Program
SDSU	San Diego State University
USCBP	United States Customs and Border Protection
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UXO	Unexploded Ordinance

1.0 Introduction

The Otay Ranch Preserve (Preserve) is located in southwestern San Diego County (County) and is composed of three major parcels: Otay River parcel, Proctor Valley parcel, and San Ysidro Mountains parcel (County of San Diego 1995). The Preserve boundaries include lands within the city of Chula Vista (City) and the county of San Diego. Lands that have been conveyed to the Preserve through March 2012 total 2,896 acres (Table 1). An additional 272 acres of Preserve land along Salt Creek (Northern Salt Creek) and northeast of Jamul Mountains (Proctor Valley [North] and Proctor Valley [South]) are anticipated to be conveyed to the Preserve in Fiscal Year (FY) 2012–13 for a total of approximately 3,168 acres (Table 2). Figures 1 through 3 show the locations of conveyed land.

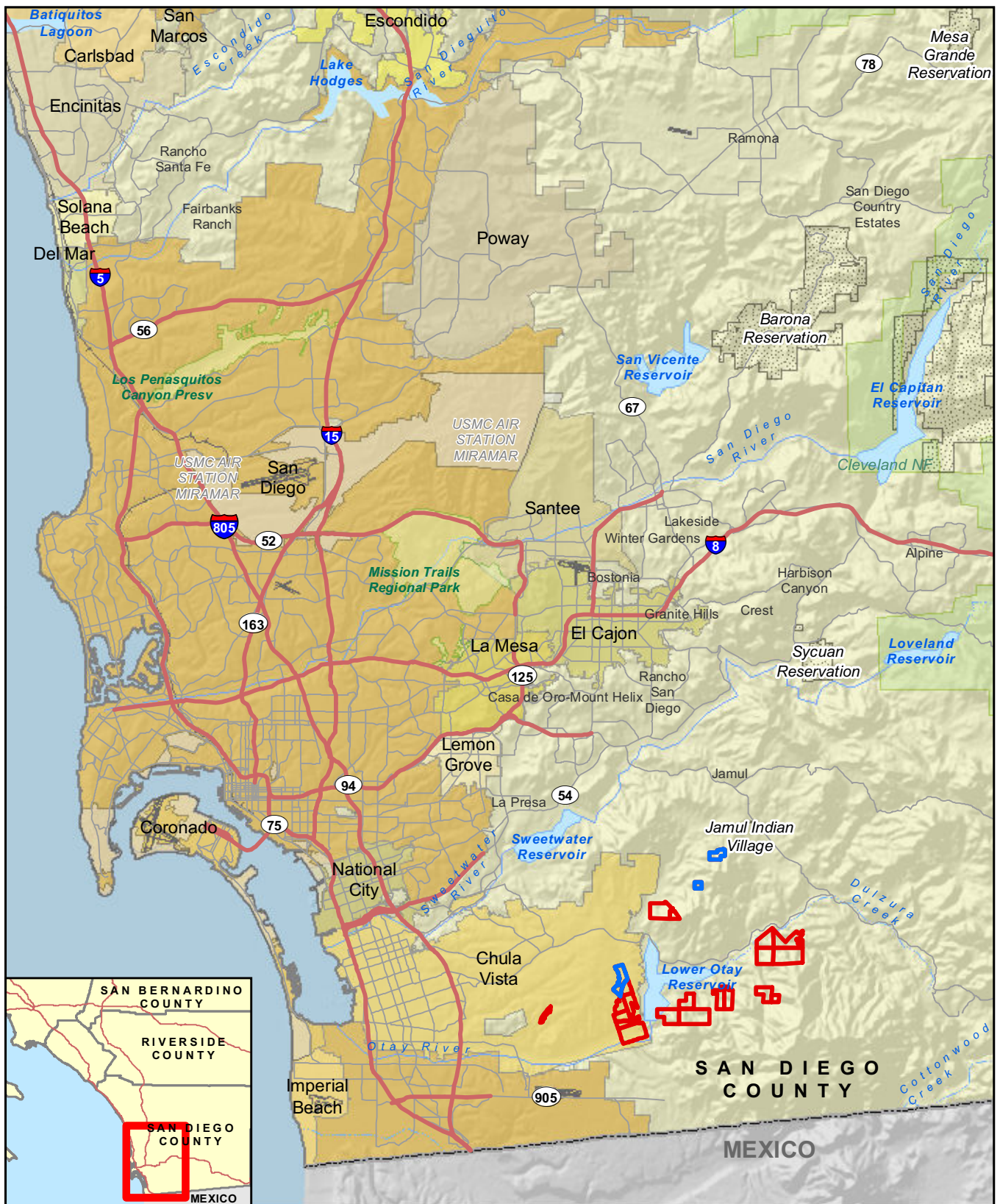
TABLE 1
CONVEYED PRESERVE PARCELS, APNS, AND ACREAGES

Parcel(s)	Assessor's Parcel Number (APN)	Acreage
Jamul Mountains	598-070-05, 598-070-06	258
Dulzura	598-160-14, 598-170-04, 647-050-04, 647-060-01	801
Little Cedar Canyon	647-110-01, 647-120-01	160
McMillin	647-100-08, 647-100-10	230
San Ysidro	647-130-03, 647-140-01	525
Northern San Ysidro	647-090-04	118
Salt Creek	643-070-08, 643-070-10, 644-080-09, 644-080-11, 644-080-15, 644-090-04	775
Wolf Canyon	644-313-07	29
TOTAL		2,896

TABLE 2
PRESERVE PARCELS, APNS, AND ACREAGES ANTICIPATED TO BE CONVEYED
IN FY 2012–13

Parcel	APN	Acreage
Northern Salt Creek	643-070-14	150
Proctor Valley (North)	597-150-06	82
Proctor Valley (South)	598-020-05	40
TOTAL		272

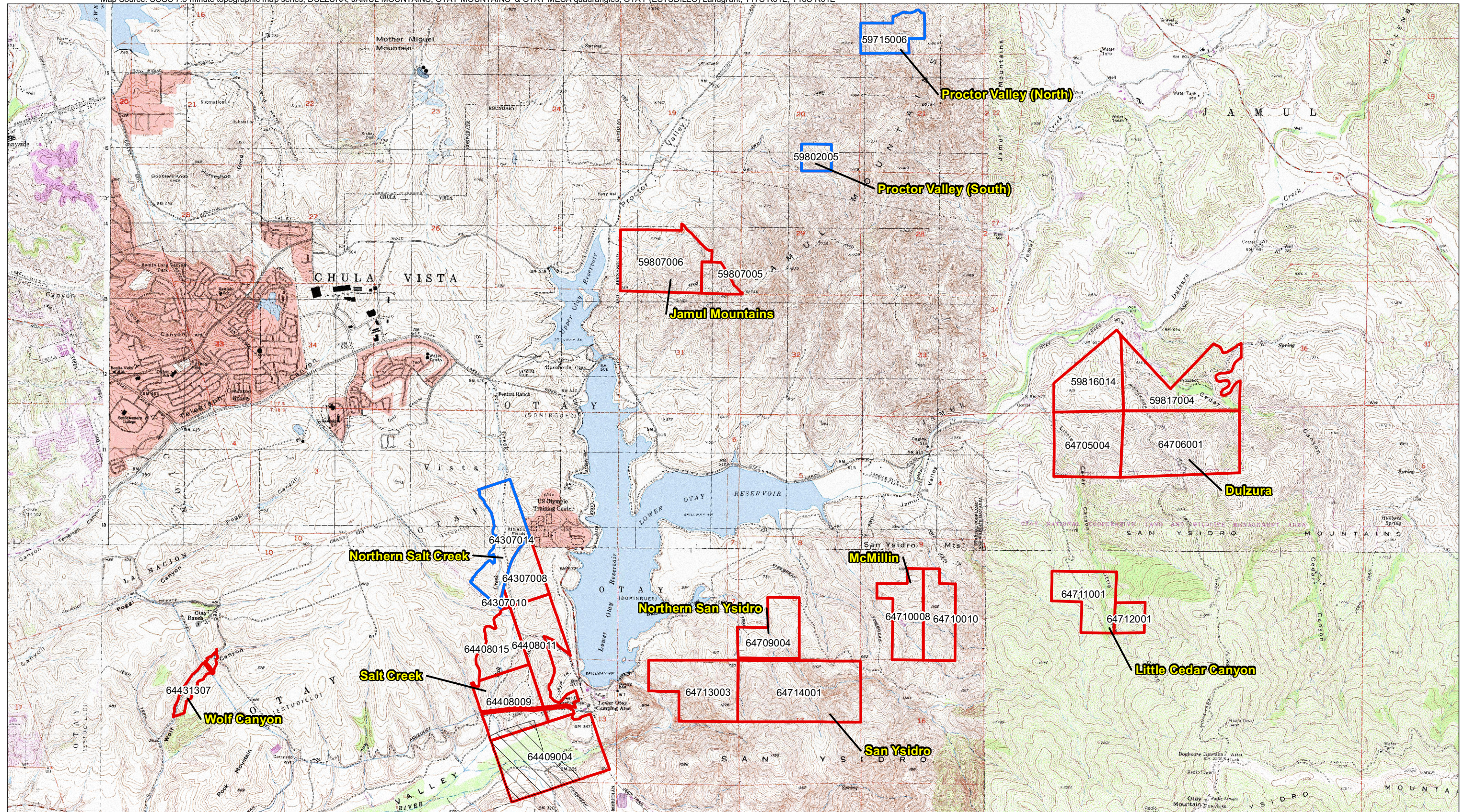
The Preserve is a hard-line preserve that has been designed and is managed specifically for protection and enhancement of the multiple species present. The Preserve also serves to connect large areas of open space through a series of wildlife corridors, including connections between regional open space areas west and east of Otay Reservoir and north to San Miguel Mountain. The Preserve is managed by the Preserve Owner/Manager (City and County; [POM]). Preserve monitoring and operations/maintenance tasks were implemented by the Preserve Steward/Biologist (RECON) in consultation with the POM.



- Conveyed Land Under POM Management as of March 2012 (2,896 acres)
- Anticipated Land to be Conveyed in FY 2012-13 (272 acres)

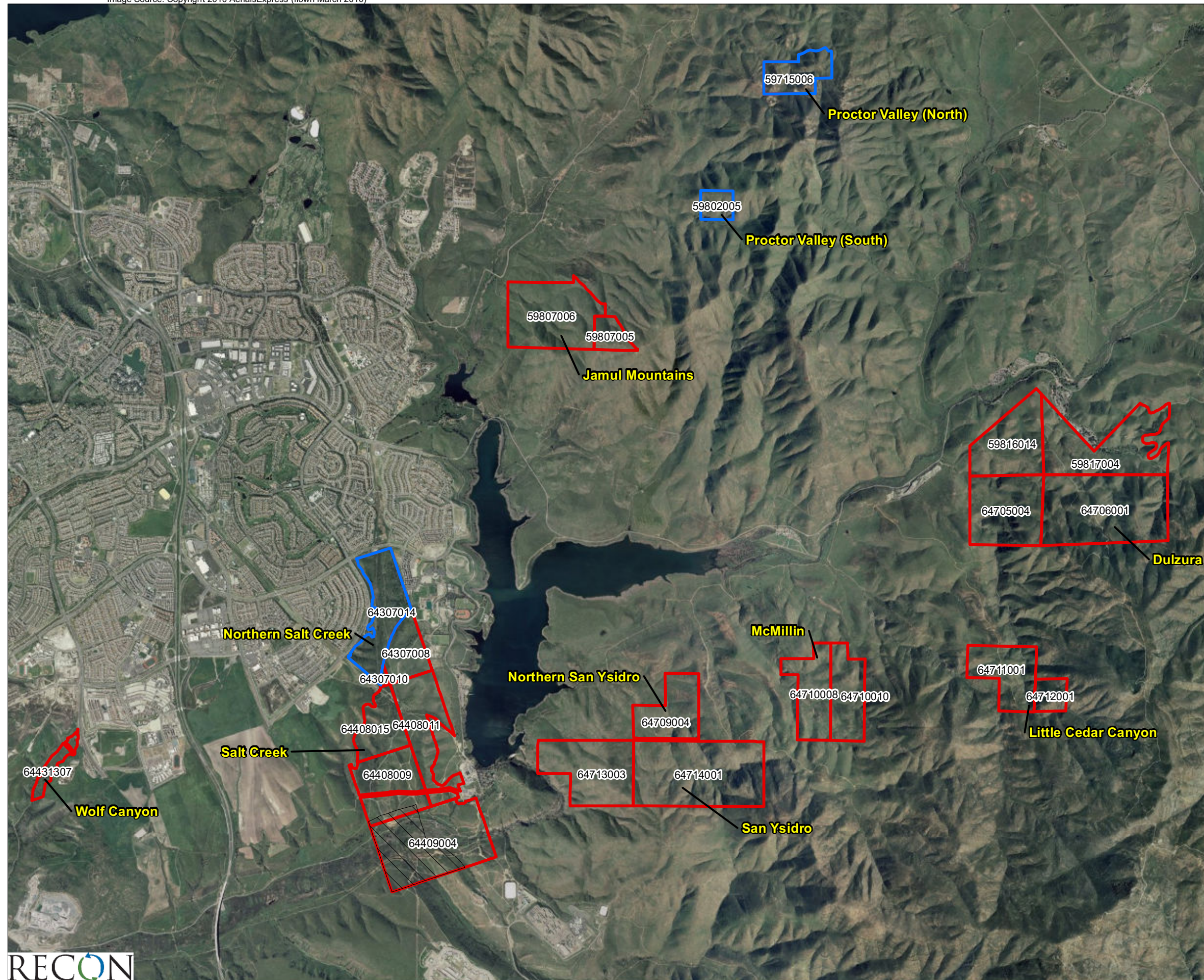
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FIGURE 1



- Conveyed Land Under POM Management as of March 2012 (2,896 acres)
- Anticipated Land to be Conveyed in FY 2012-13 (272 acres)
- Salt Creek (FUDS)

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- Conveyed Land Under POM Management as of March 2012 (2,896 acres)
- Anticipated Land to be Conveyed in FY 2012-13 (272 acres)
- Salt Creek (FUDS)

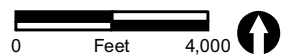


FIGURE 3

Location of Conveyed Otay Ranch Preserve Land on Aerial Photograph

The purpose of this annual report is to document access issues, new site disturbances, previously undetected plant species, observed wildlife, and management tasks performed between January 1, 2012 and December 31, 2012.

2.0 Preserve Monitoring

The following section describes Preserve monitoring tasks that occurred between January 1 and December 31, 2012. These Preserve monitoring tasks were proposed in either the FY 2011–12 Annual Work Plan or the FY 2012–13 Annual Work Plan (RECON 2011 and 2012a). Since this annual report is based on a calendar year and the work plans are based on fiscal years, tasks from both work plans occurred during the annual reporting time frame. Tasks performed between January 1, 2012 and June 30, 2012 were from the FY 2011–12 Annual Work Plan; tasks performed between July 1, 2012 and December 31, 2012 were from the FY 2012–13 Annual Work Plan. The headings used within this annual report match the associated task numbers from the FY 2011–12 and FY 2012–13 Annual Work Plans.

The following Preserve monitoring tasks were conducted in support of the Otay Ranch Preserve Phase 1 and Phase 2 Resource Management Plans (RMP; County of San Diego 1995, 2002): surveys including Quino checkerspot butterfly (QCB; *Euphydryas editha quino*) surveys, photo point monitoring, baseline surveys, brown-headed cowbird (*Molothrus ater*) trapping, least Bell's vireo (LBV; *Vireo bellii pusillus*) surveys, field assessment for newly conveyed lands, and fairy shrimp (*Branchinecta* spp.) surveys; land stewardship consisting of site visits; meetings; and coordination; and reporting. Attachments 1 and 2 list plant and wildlife species, respectively, documented during surveys and site visits between January 1 and December 31, 2012.

Task 1: Surveys

Surveys conducted between January 1 and December 31, 2012 are discussed in the subtask sections below. The results of these surveys are summarized in Task 4: Reporting.

Subtask 1d (FY 2011–12): Quino Checkerspot Butterfly Surveys

A QCB habitat assessment and five adult flight surveys were conducted at the Northern San Ysidro, McMillin, Little Cedar Canyon, Dulzura, and Jamul Mountains parcels between February 8, 2012 and March 22, 2012. The habitat quality (high, moderate, or low) was determined based on presence and density of host and nectar plants, physical characteristics of the habitat (slope, vegetation density, and soil type), invasive species, and proximity to known QCB observations prior to initiation of surveys. Areas excluded from the survey included developed land, wetland, woodland, and closed-canopy

chaparral, as well as many of the slopes and most of the denser habitat within the study area. While slopes and some of the denser habitat may be marginally suitable for the QCB, they were not considered appropriate for the purposes of this survey. During adult flight surveys, habitat quality, QCB observations, and host plant occurrences (dot-seed plantain [*Plantago erecta*], purple owl's clover [*Castilleja exserta*], and thread-leaved bird's beak [*Cordylanthus rigidus*]) were recorded and mapped. Incidental butterfly observations were also recorded.

Subtask 1e (FY 2011–12): Photo Point Monitoring

Photo points represent the first phase of long-term vegetation monitoring within the Preserve. Photo monitoring points were established at the Dulzura, Jamul Mountains, Northern San Ysidro, McMillin, and Little Cedar Canyon parcels in May (Attachment 3: Figures 4 through 6). Fifteen photo monitoring points were established at each parcel set. Photo point monitoring was completed on May 15, 2012. In addition, photo monitoring points were established at Northern Salt Creek and the Salt Creek Formerly Used Defense Site (FUDS) during baseline surveys in May and June (Attachment 3: Figure 7).

Subtask 1a (FY 2011–12): Baseline Surveys

During the spring of 2012, RECON biologists conducted surveys to gather baseline biological information at the Salt Creek FUDS and Northern Salt Creek parcel. The surveys consisted of vegetation mapping and general plant and wildlife surveys. Sensitive species were observed incidentally, and suitable habitat for sensitive wildlife species was evaluated. Vegetation communities were mapped using the *Vegetation Classification Manual for Western San Diego County* (San Diego Association of Governments [SANDAG] 2011), which is based on *A Manual of California Vegetation* (Sawyer et al. 2009). Plant and wildlife species observed during baseline surveys are listed in Attachments 1 and 2, respectively. Vegetation communities are listed in Attachment 4.

Subtask 1b (FY 2011–12): Brown-headed Cowbird Trapping

Jennifer Sexton (TW Biological Services; subcontractor) monitored two brown-headed cowbird traps installed at Salt Creek from April 2, 2012 through June 30, 2012. The traps were placed near known LBV nesting sites. One trap was located along Salt Creek and the other along the Otay River.

Subtask 1c (FY 2011–12) and 1d (FY 2012–13): Least Bell's Vireo Surveys

Eight LBV presence/absence surveys and nine nest monitoring visits were conducted by Kevin Clark (San Diego Natural History Museum; subcontractor) at Salt Creek between April 10, 2012 and July 20, 2012. During the final nest monitoring survey, a yellow-billed cuckoo (*Coccyzus americanus*; a California endangered species and a candidate species for listing as federal endangered) was observed and heard calling from within the Salt Creek parcels. Subsequently, five surveys for yellow-billed cuckoo were conducted to gather more information between July 22, 2012 and August 4, 2012.

Subtask 1a (FY 2012–13): Field Assessment for Newly Conveyed Lands

Mark Doderio and Anna Bennett conducted a preliminary site assessment at Wolf Canyon on August 16, 2012 to determine what focused surveys to recommend for the FY 2013–14 Annual Work Plan. A coastal California gnatcatcher (*Polioptila californica californica*; CAGN) and a coastal cactus wren (*Campylorhynchus brunneicapillus*; [CACW]) were heard immediately adjacent to the Wolf Canyon parcel during the field assessment (Attachment 3: Figure 8). Future proposed focused surveys include U.S. Fish and Wildlife Service (USFWS) protocol surveys for CAGN and sensitive plant surveys. At least one of the baseline wildlife surveys will be conducted in May 2013 to detect least Bell's vireo. If least Bell's vireo is detected at Wolf Canyon during the FY 2012–13 baseline surveys, USFWS protocol surveys may be proposed in the future.

Subtask 1h (FY 2012–13): Fairy Shrimp Surveys

Wet season fairy shrimp surveys started on December 20, 2012 at the Salt Creek parcels, one week after initial inundation (December 13, 2012). Surveys are being conducted in ponded areas within Salt Creek using the methods described in the USFWS protocol (USFWS 1996). A detailed report summarizing the results of the surveys will be submitted to the POM and USFWS in spring 2013 within 90 days of the final survey completion.

Task 2: Land Stewardship

Subtask 2a (FY 2011–12 and FY 2012–13): Site Visits

Site visits to document access issues, previously undetected species, weeds, and the overall health of the Preserve were conducted by RECON biologists throughout 2012. Plant and animal species documented during site visits, QCB surveys, and baseline

surveys are recorded in Attachments 1 and 2. Site visits were conducted on the following dates:

- Northern San Ysidro: January 6, February 3, March 14, April 27, June 1, September 25, October 19, November 16, November 20, November 30, and December 27.
- San Ysidro: January 6, February 7, March 9, April 27, May 21, June 1, August 10, September 25, October 19, November 20, November 30, December 3, December 4, and December 27.
- McMillin: January 6, February 23, March 14, April 27, June 15, August 10, September 25, October 19, November 29, and December 27.
- Little Cedar Canyon: January 27, February 24, March 15, September 6, September 12, October 26, November 26, and November 29.
- Jamul Mountains: January 27, February 17, March 23, April 13, June 8, June 22, August 24, October 5, November 4, and December 9.
- Dulzura: January 27, February 10, March 9, April 6, May 12, June 1, June 6, June 22, July 8, July 20, July 25, August 17, August 30, September 12, September 25, October 12, November 4, November 9, November 20, December 9, and December 14.
- Salt Creek: January 2, January 30, February 10, March 2, March 9, May 18, June 5, June 11, July 8, July 15, July 20, August 3, August 10, August 24, August 30, September 12, September 25, October 2, October 5, October 19, October 31, November 9, November 20, November 29, November 30, December 3, December 4, December 14, December 17, December 21, and December 23.
- Wolf Canyon: August 3, October 5, November 6, and November 20.

Additional site visits were performed in conjunction with focused survey and access control tasks. Previously undetected species include incidental plant and wildlife sightings noted during QCB surveys and site visits and are discussed in further detail below. Notable events documented from site visits include:

Northern San Ysidro

- Previously undetected species observed during site visits and QCB surveys include seven species of wildlife and six native plant species. Of these, two sensitive species of wildlife, white-tailed kite (*Elanus leucurus*) and QCB were observed (Attachment 3: Figure 9). White-tailed kite is a California Department of Fish and Wildlife (CDFW) fully protected species (CDFW 2011) and was observed flying overhead. QCB is federally listed as endangered and covered under the City of Chula Vista Multiple Species Conservation Program Subarea Plan (MSCP Subarea Plan) and RMP (CDFW 2011; City of Chula Vista 2003; County of San Diego 1995, 2002).

San Ysidro

- Damage from off-road vehicles was observed in QCB habitat in the northeastern portion of the site.
- One new quad trail was observed in the northwestern corner of the parcel.
- Fence posts that had been installed to restrict access to a spur road were observed to be damaged.

McMillin

- Previously undetected species observed during site visits and QCB surveys include ten species of wildlife and twelve plant species—ten native and one non-native. Of these, two sensitive wildlife species, white-tailed kite and QCB were observed (see Attachment 3: Figure 9). White-tailed kite is a California fully protected species (CDFW 2011) and was observed flying overhead. QCB is federally listed as endangered and covered under the MSCP Subarea Plan and RMP (CDFW 2011; City of Chula Vista 2003; County of San Diego 1995, 2002).
- Two adult and one juvenile golden eagles (*Aquila chrysaetos canadensis*; CDFW fully protected; CDFW watch list; MSCP Subarea Plan covered) were observed flying overhead on August 10, 2012 (see Attachment 3: Figure 9).

Little Cedar Canyon

- Previously undetected species observed during site visits and QCB surveys include 5 species of wildlife and 12 plant species—2 non-native and 10 native. Of these, one sensitive wildlife species, San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), was observed. San Diego black-tailed jackrabbit is a CDFW species of special concern (CDFW 2011).
- New vehicle tracks were observed through native habitat.

Jamul Mountains

- Signs of equestrian activity were observed on the road during site visits.
- Previously undetected species observed during site visits and QCB surveys included 16 species of wildlife and 23 plant species—18 native and 6 non-native. Of these, two sensitive wildlife species, Cooper's hawk (*Accipiter cooperii*) and QCB, were observed. One sensitive plant species, Brewer's red maid (*Calandrinia breweri*), was observed (Attachment 3: Figure 10). Cooper's hawk was observed flying overhead and is a CDFW Species of Special Concern and covered under the MSCP Subarea Plan (CDFW 2011; City of Chula Vista 2003). QCB is federally listed as endangered and covered under the MSCP Subarea Plan and RMP (CDFW 2011; City of Chula Vista 2003; County of San Diego 1995, 2002). Brewer's red maid has a CNPS rare plant ranking of 4.2 (Uncommon in California; fairly endangered in California) (CNPS 2012).

Dulzura

- Previously undetected species observed during site visits and QCB surveys include 12 species of wildlife and 18 plant species—16 native and 2 non-native. Of these, one sensitive plant species, Palmer's goldenbush (*Ericameria palmeri*), and two sensitive wildlife species, San Diego black-tailed jackrabbit and QCB, were observed (Attachment 3: Figure 11). Palmer's goldenbush has a CNPS rare plant ranking of 1B.1 (rare, threatened, or endangered in California or elsewhere; seriously endangered in California) (CNPS 2012). San Diego black-tailed jackrabbit is a CDFW species of special concern (CDFW 2011). QCB is federally listed as endangered and covered under the MSCP Subarea Plan and RMP (CDFW 2011; City of Chula Vista 2003; County of San Diego 1995, 2002).
- Burnt vegetation from a recent fire was observed in early July. It was estimated that the fire burned approximately one acre.
- Habitat along a hill top where QCB is known to occur continues to be damaged from vehicles.
- Recent vehicle tracks through sensitive habitat and illegal shooting were observed immediately adjacent to Preserve signs that outlaw trespassing.
- In July, U.S. Customs and Border Protection (USCBP) installed boulders to block two unauthorized roads at Dulzura. Initially, vehicle use appeared to cease; however, in August recent tracks from all-terrain vehicles were observed through sensitive habitat adjacent to the unauthorized spur roads along the Minnewawa Truck Trail. The observation of vehicle tracks indicates that additional barriers will need to be installed to prohibit use of these roads.

Salt Creek

- New vehicle tracks and hoof prints were observed in the vernal pools adjacent to the road in the FUDS area. Subsequently, the vernal pools were fenced off to limit access from the adjacent road.
- USCBP agents were observed driving through sensitive habitat.
- Out of season runoff has been observed for multiple years at Salt Creek. In the last year, runoff has increased along a side canyon east of the Salt Creek drainage. This area is type converting from alkali meadow to riparian scrub due to runoff.
- A previously undetected native plant species, Indian hemp (*Apocynum cannabinum*), was detected at Salt Creek. Although this species is not considered sensitive, it does not commonly occur in the southern part of San Diego County. The closest known occurrences were last documented in 1938 from the Tijuana River near the United States/Mexico border and in 1938 from Jamacha (Consortium of California Herbaria 2012). Additional sensitive plant species are shown on Attachment 3: Figures 12a and 12b.

- Previously repaired fencing along the eastern boundary of Salt Creek had been cut and sensitive habitat had been driven through to access the site. The fence damage was repaired by RECON in August, 2012.
- Two Preserve signs had been vandalized. The signs appeared to be knocked over by a vehicle (Attachment 5: Photograph 1).
- The previously abandoned vagrant camp was converted to a shade structure by USCBP and subsequently removed in October 2012 following coordination with USCBP.
- One new stinkwort (*Dittrichia graveolens*) location was observed in the road. The stinkwort individual was removed by hand.

Wolf Canyon

- Vehicular damage to barbed wire fence and cholla stands was observed.

Task 3: Meetings and Coordination

The Preserve Steward/Biologist (RECON) attended monthly San Diego Management and Monitoring Program (SDMMP) and quarterly South County Land Manager (SCLM) meetings, as well as various land manager meetings and workshops throughout 2012. Meeting topics and dates are described in detail below.

Subtask 3a (FY 2011–12 and FY 2012–13): SDMMP and SCLM

RECON attended monthly San Diego Management and Monitoring Program (SDMMP) and quarterly South County Land Manager (SCLM) meetings to assure consistency with regional conservation efforts and plans. Table 3 provides a list of the meetings attended.

TABLE 3
SDMMP & SCLM MEETINGS
JANUARY 1, 2012–DECEMBER 31, 2012

Date	Meeting	Presenter	Topic
01/17/12	SCLM	-	South County Land Manager Meeting—Updates and Coordination
01/25/12	SDMMP	Patricia Gordon–Reely, CBI Jason Giessow, Dendra	Regional Framework & Strategy for Management of Invasive Species; Regional Impact Assessment of Invasive Species
02/22/12	SDMMP	Ron Rempel, SDMMP	San Diego Management Strategic Plan for Conserved Lands
03/28/12	SDMMP	Kris Preston, Nature Reserves of Orange County	Changing Distribution Patterns of Quino Checkerspot: Linking Local Extinction Patterns and Variable Habitat Relationships
04/17/12	SCLM	-	South County Land Manager Meeting—Updates and Coordination
04/25/12	SDMMP	Dr. Barbara Kus, USGS	Brown-headed Cowbird Management in Protecting Sensitive Species
5/23/12	SDMMP	Megan Jennings, San Diego State University/University of California Davis Joint Doctoral Program	Bobcat Movement Study
6/27/12	SDMMP	Michael Beck, Endangered Habitats Conservancy/ Endangered Habitats League Patricia Gordon–Reely, CBI Cathy Chadwick, Earth Discovery Institute	Crestridge Ecological Reserve
7/17/12	SCLM	-	Round table discussion: Land manager updates, brown-headed cowbird trapping efforts, Quino checkerspot butterfly conservation, access issues
7/25/12	SDMMP	Kelley Barr, USGS Robert Fischer, USGS	Genetic Connectivity of the Coastal Cactus Wren Assessment of the Western Pond Turtle Population Genetic Structure and Diversity in Southern California
8/22/12	SDMMP	Amy Lucas, University of Nevada Reno	Thorne's Hairstreak
9/26/12	SDMMP	Carlton Rochester, USGS Jeff Tracey, USGS Cheryl Brehme, USGS	San Diego County Linkages Evaluation Presentation Small Animal Use of Wildlife Underpasses Badger Survey and Connectivity Assessment
10/16/12	SCLM	-	South County Land Manager Meeting—Updates and Coordination
10/24/12	SDMMP	Dave Varner, San Elijo Lagoon Conservancy Ron Rempel, SDMMP	Invasive Plant Reporting PDA Application & SELC Activities Overview Management Strategic Plan Overview
11/28/12	SDMMP	-	SDMMP meeting cancelled.
12/12/12	SDMMP	Kris Preston, SDMMP	<i>Potential Demographic Responses of Southern California Shrubland Songbirds to Climate Change.</i>

CBI = Conservation Biology Institute

SDMMP = San Diego Management and Monitoring Program

SCLM = South County Land Manager

USGS = United States Geological Survey

RECQN

Subtask 3b (FY 2011–12): Additional Land Manager Meetings

Additional meetings were attended by RECON to coordinate with the POM and other agencies, including USCBP, USFWS, CDFW, and U.S. Army Corps of Engineers (ACOE). RECON also attended a conceptual models workshop hosted by the Institute for Ecological Monitoring and Management (IEMM) and San Diego State University (SDSU) and an explosives safety training hosted by the City and ACOE. Table 4 provides a list of the meetings and workshops attended below.

TABLE 4
ADDITIONAL LAND MANAGER MEETINGS
JANUARY 1, 2012–DECEMBER 31, 2012

Date	Meeting	Topic
01/18/12	Border Management Task Force	USCBP monthly border management meeting
01/20/12	USFWS, CDFW, POM, RECON	Land manager meeting to discuss access issues on-site at the Dulzura parcels
02/23/12	ACOE, POM, RECON	Conference call to discuss anomaly avoidance in the FUDS area of the Salt Creek parcels
02/29/12	IEMM/SDSU	<i>Developing Conceptual Models: Translating Knowledge into Action</i>
06/26/12	POM, RECON, various agencies	Annual Multiple Species Conservation Plan Workshop
11/5/12	POM, RECON	Annual Preserve Management Meeting
11/15/12	POM, RECON, ACOE, various agencies	<i>Explosives Safety Training, Former Brown Field Bombing Range, San Diego County, CA</i>
12/5/12	POM, RECON, SDMMMP, various agencies	CACW Conservation Planning Meeting
12/14/12	POM, RECON, CDFW	Site visit to discuss access issues and law enforcement at the Salt Creek and Dulzura parcels
12/19/12	POM, RECON, various agencies	Policy Committee Meeting

USCBP = U.S. Customs and Border Protection
 USFWS = U.S. Fish and Wildlife Service
 CDFW = California Department of Fish and Wildlife
 POM = Preserve Owner/Manager (City, County)
 FUDS = Formerly Used Defense Site
 IEMM = Institute of Ecological Monitoring and Management
 SDSU = San Diego State University
 ACOE = U.S. Army Corps of Engineers
 SDMMMP = San Diego Management and Monitoring Program
 CACW = California cactus wren

Subtask 3c (FY 2011–12 and FY 2012–13): Meeting Notes

Meeting notes were submitted to the POM as part of Subtask 3c for the FY 2011–12 and FY 2012–13 Annual Work Plans following all meetings described under Subtask 3a.

Subtask 3d (FY 2011–12 and FY 2012–13): POM

The POM and RECON coordinated consistently via phone and e-mail. Coordination included meetings, conference calls, and other communication to discuss the budget and status of FY 2011–12 Annual Work Plan tasks, the FY 2012–13 Annual Work Plan, access control strategies, parcel boundaries for Wolf Canyon, and the Multiple Species Conservation Plan annual workshop.

Task 4: Reporting

The following reports were submitted to the POM in support of the FY 2011–12 and FY 2012–13 Annual Work Plans:

Subtask 4a (FY 2011–12): Database Contributions

Data that were collected in the FY 2010–11 surveys was submitted to California Natural Diversity Database (CNDDDB) and San Diego Biological Information and Observation System (SanBIOS) as part of Subtask 4a in the FY 2011–12 Annual Work Plan.

Subtask 4b (FY 2011–12): Baseline Survey Reports

The 2010–11 Baseline Survey Report for the Northern San Ysidro, McMillin, and Little Cedar Canyon Parcels of the Otay Ranch Preserve, 2010–11 Baseline Survey Report for the Dulzura Parcels of the Otay Ranch Preserve, and 2010–11 Baseline Survey Report for the Jamul Mountains Parcels of the Otay Ranch Preserve (RECON 2012b–d) were submitted as part of Subtask 4b in the FY 2011–12 Annual Work Plan. The surveys were conducted in FY 2010–11. The results are summarized below.

Northern San Ysidro

- Seven vegetation communities were mapped in the Northern San Ysidro parcels. Of these, one vegetation community is considered a Tier 1 Uncommon Upland by the Multiple Species Conservation Plan County of San Diego Subarea Plan (MSCP Subregional Plan), and one is a wetland considered sensitive by state and federal resource agencies (County of San Diego 1997).
- A total of 134 native plant species and 39 non-native plant species were observed. Eleven of the native plant species are considered sensitive.
- Wildlife observed includes 22 species of invertebrates, 1 species of amphibian, 9 species of reptiles, 44 species of birds, and 7 species of mammals. Of these,

one invertebrate species, two reptile species, seven bird species, and two mammal species are considered sensitive.

McMillin

- Five vegetation communities were mapped in the McMillin parcels. Of these, two vegetation communities are wetlands considered sensitive by state and federal resource agencies.
- A total of 129 native plant species and 31 non-native plant species were observed. Twelve of the native plant species are considered sensitive.
- A total of 18 species of invertebrates, 3 species of amphibians, 7 species of reptiles, 45 species of birds, and 5 species of mammals were observed. Of these, one invertebrate species, one amphibian species, one reptile species, five bird species, and two mammal species are considered sensitive.

Little Cedar Canyon

- Six vegetation communities were mapped with the Little Cedar Canyon parcels. Of these, one vegetation community is considered a Tier 1 Uncommon Upland by the MSCP Subregional Plan, and one is a wetland considered sensitive by state and federal resource agencies (County of San Diego 1997).
- A total of 101 native plant species and 25 non-native plant species were observed. Eleven of the native plant species are considered sensitive.
- A total of 18 species of invertebrates, 3 species of amphibians, 7 species of reptiles, 45 species of birds, and 5 species of mammals were observed in the Little Cedar Canyon parcels. Of these, one invertebrate species, one reptile species, and two bird species are considered sensitive.

Dulzura

- Twelve vegetation communities were mapped in the Dulzura parcels during baseline surveys. Of these, four vegetation communities are considered Tier I Uncommon Uplands by the MSCP Subregional Plan (County of San Diego 1997).
- A total of 180 native plant species and 41 non-native plant species were observed. A total of 20 of the native plant species are considered sensitive.
- Wildlife observed includes 25 invertebrate species, 1 amphibian species, 7 reptile species, 71 bird species, and 4 mammal species. Of these, 1 invertebrate species, 3 reptile species, 4 bird species, and 1 mammal species are considered sensitive.

Jamul Mountains

- Three vegetation communities were mapped in the Jamul Mountains parcels during baseline surveys. Of these, one vegetation community is considered a Tier 1 Uncommon Upland by the MSCP Subregional Plan, and one is a wetland considered sensitive by state and federal resource agencies (County of San Diego 1997).
- A total of 96 native plant species and 23 non-native plant species were observed. Nine of the native plant species are considered sensitive.
- Wildlife observed includes nine invertebrate species, four reptile species, 28 bird species, and five mammal species. Of these, two reptile species, three bird species, and one mammal species are considered sensitive.

Subtask 4d (FY 2011–12): QCB Pre-survey Notification Letter

The Pre-Survey Notification of Focused Surveys for Quino Checkerspot Butterfly at Otay Ranch Preserve, San Diego County (RECON 2012e) was submitted to Susie Tharratt at USFWS on February 3 prior to the 2012 QCB surveys as part of Subtask 4d in the FY 2011–12 Annual Work Plan.

Subtask 4e (FY 2011–12): QCB Post-survey Reports

Three post survey reports were submitted following the 2012 QCB surveys as part of Subtask 4e in the FY 2011–12 Annual Work Plan: 1) Dulzura parcels; 2) Jamul Mountains parcels; 3) Northern San Ysidro, McMillin, and Little Cedar Canyon (RECON 2012f–h). The results are summarized below.

- A total of 34 QCB adult butterflies were observed at the Northern San Ysidro, McMillin, Dulzura, and Jamul Mountains parcels (Table 5).

**TABLE 5
BUTTERFLY OCCURRENCES FROM THE 2012 QCB SURVEYS**

Parcel	Butterfly Abundance		
	Total QCB Observed	Total Butterfly Species Observed	Total Butterflies Observed
Northern San Ysidro	1 ¹	6	80
McMillin	17	11	490
Little Cedar Canyon	0 ²	7	99
Dulzura	14	20	588
Jamul Mountains	2	11	268
TOTAL	34	20	1,525

¹One additional QCB adult was incidentally observed off-site, 260 feet east of the parcel boundary.

²Two QCB adults were incidentally observed off-site, approximately 2,300 feet north of the Little Cedar Canyon parcel boundary.

- No QCB adults were observed at the Little Cedar Canyon; however, two QCB adults were incidentally observed off-site, approximately 2,300 feet north of the Little Cedar Canyon parcel boundary.
- A total of 105.2 acres of high-quality habitat, 50.67 acres of moderate-quality habitat, and 436.02 acres of low-quality habitat were mapped during surveys. A total of 1,322.39 acres were excluded from the survey, as they were not considered appropriate for the purposes of this survey (Table 6).

TABLE 6
HABITAT QUALITY RESULTS FROM THE 2012 QCB SURVEYS

Parcel	High-quality Habitat (acres)	Moderate-quality Habitat (acres)	Low-quality Habitat (acres)	Excluded from Survey Area (acres)
Northern San Ysidro	11.2	1.6	21.4	89.7
McMillin	39.4	14.4	187.2	187.2
Little Cedar Canyon	-	7.3	9.8	152.1
Dulzura	43.0	26.3	183.4	678.5
Jamul Mountains	11.6	1.1	34.2	214.8
TOTAL	105.2	50.7	436.0	1,322.3

Subtask 4f (FY 2011–12): Bi-annual Report

The January 1–April 30, 2012 Biannual Report for the Otay Ranch Preserve FY 2011–12 was submitted as part of Subtask 4f in the FY 2011–12 Annual Work Plan (RECON 2012i). The Bi-annual Report summarized all preserve monitoring and operations/maintenance tasks performed between January 1 and April 30, 2012.

Subtask 4g (FY 2011–12): Annual Report

The 2011 Annual Report for the Otay Ranch Preserve was submitted as part of Subtask 4g in the FY 2011–12 Annual Work Plan (RECON 2012j). The Annual Report summarized all preserve monitoring and operations/maintenance tasks performed between January 1 and August 31, 2012.

Subtask 4i (FY 2011–12): Annual Work Plan

The 2012–13 Annual Work Plan for Otay Ranch Conveyed Lands Managed by the Otay Ranch Preserve Owner/Manager was submitted as part of Subtask 4i in the FY 2011–12 Annual Work Plan (RECON 2012a). The FY 2012–13 Annual Work Plan proposed preserve monitoring and operations/maintenance tasks to be performed between July 1, 2011 and August 31, 2012.

Subtask 4j (FY 2011–12): RMP/MSCP Consistency Analysis

The Draft Resource Management Plan/Multiple Species Conservation Program Consistency Analysis was submitted as part of Subtask 4j in the FY 2011–12 Annual Work Plan (RECON 2012k). The draft consistency analysis identified and compared the differences between the RMP, MSCP Subarea Plan, and MSCP Subregional Plan conservation goals and biota monitoring standards noting where the RMP is deficient and/or out of date when compared to MSCP Subarea Plan and Subregional Plan standards for protection of covered species and where the RMP needs to be supplemented to match MSCP Subarea Plan and Subregional Plan standards. For each portion of the RMP that was determined to be out of date and/or in need of supplementation, a description of proposed revisions and/or updates to ensure consistency with MSCP Subarea Plan and Subregional Plan standards were provided. For each area identified as being inconsistent with the MSCP Subarea Plan and/or MSCP Subregional Plan, a brief explanation justifying the need for an update was included.

Subtask 4a (FY 2012–13): Baseline Survey Report

The 2012 Baseline Survey Report for the Salt Creek Formerly Used Defense Site and Northern Salt Creek Parcel of the Otay Ranch Preserve was submitted as part of Subtask 4a in the FY 2012–13 Annual Work Plan (RECON 2012l). The results are summarized below and shown on Attachment 3: Figures 12a and 12b.

Salt Creek FUDS

- A total of 23 vegetation communities and 1 land cover type consisting of dirt roads were mapped. Of these, four vegetation communities are considered Tier I Uncommon Uplands by the MSCP Subregional Plan (County of San Diego 1997).
- A total of 137 native plant species and 67 non-native plant species were observed. Of these, 16 of the native plant species are considered sensitive.
- Wildlife observed includes 12 invertebrate species, 3 amphibian species, 6 reptile species, 50 bird species, and 6 mammal species. Of these, 1 invertebrate species, 2 reptile species, 7 bird species, and 2 mammal species are considered sensitive.

Northern Salt Creek

- A total of 18 vegetation communities and 1 land cover type consisting of dirt roads were mapped in Northern Salt Creek during baseline surveys. Of these, 3

vegetation communities are considered Tier I Uncommon Uplands by the (City of Chula Vista 2003).

- A total of 91 native plant species and 42 non-native plant species were observed. Of these, 12 of the native plant species are considered sensitive.
- Wildlife observed includes 7 invertebrate species, 5 reptile species, 43 bird species, and 6 mammal species. Of these, 1 reptile species, 7 bird species, and 2 mammal species are considered sensitive.

Subtask 4d (FY 2012–13): Least Bell's Vireo 2012 Post-Survey Report

The LBV Surveys and Nest Monitoring at the Salt Creek Parcels of the Otay Ranch Preserve was submitted as part of Subtask 4d in the FY 2012–13 Annual Work Plan (San Diego Natural History Museum 2012). The results are summarized below and shown on Attachment 3: Figure 13.

- Twelve LBV males (ten paired and two transient) were detected during presence/absence surveys.
- A total of 14 LBV nests were observed. Of these, eight nests were successful, five failed due to predation from BHCO, and one was abandoned.
- A total of 22 LBV individuals fledged. Of these, five individuals came from two nests that were parasitized and had cowbird eggs removed during nest monitoring.
- An individual yellow-billed cuckoo was observed during three of the five yellow-billed cuckoo surveys.

Subtask 4e (FY 2012–13): Brown-headed Cowbird 2012 Trapping Report

The 2012 Otay Ranch Preserve Brown-Headed Cowbird Trapping Program was submitted as part of Subtask 4d in the FY 2012–13 Annual Work Plan (TW Biological Services 2012). The trapping locations are shown on Attachment 3: Figure 13. The results are summarized below.

- A total of 36 cowbirds were captured within the project area, including 19 males and 17 females.

Subtask 4f (FY 2012–13): Fairy Shrimp Pre-Survey Notification Letter

The Pre-Survey Notification of Wet Season Fairy Shrimp at Otay Ranch Preserve – Salt Creek Parcels, City of Chula Vista, San Diego County was submitted to Susie Tharratt

at USFWS on October 15 prior to the winter 2012–13 fairy shrimp surveys as part of Subtask 4f in the FY 2012–13 Annual Work Plan (RECON 2012m).

Subtask 4h (FY 2012-13): Bi-annual Reports

The Bi-annual Report for Otay Ranch Preserve May 1–August 31, 2012 was submitted as part of Subtask 4h in the FY 2012–13 Annual Work Plan (RECON 2012n). The Bi-annual Report summarized all preserve monitoring and operations/maintenance tasks performed between May 1 and August 31, 2012.

3.0 Operations/Maintenance

The following section describes Operations/Maintenance tasks that occurred between January 1 and December 31, 2012. These tasks were proposed in either the FY 2011–12 Annual Work Plan or the FY 2012–13 Annual Work Plan (RECON 2011 and 2012a).

Task 5: Access Control

Access control within the Preserve continues to be one of the highest priority tasks. Sensitive habitat, plants, and wildlife are being impacted by USCBP and public vehicles traveling outside of approved roads and into habitat. Access issues are shown on Attachment 3: Figures 14 through 17. The following sections detail work that was performed in an ongoing effort to minimize damage to the Preserve. Notable activities that were performed as part of access control include:

- On January 20, RECON attended an on-site meeting with USFWS, CDFW, and the POM to check site conditions and discuss access issues and potential road closures at the Dulzura parcels.
- A figure depicting utility easements at Salt Creek was submitted to the POM on February 1 to aid in prioritizing areas for access control (see Attachment 3: Figure 14).
- RECON coordinated with Jeff Armentrout, FUDS program manager with ACOE, regarding FUDS access in January 2012. A conference call between the POM, RECON, and ACOE occurred on February 23 to discuss anomaly avoidance in the FUDS area of the Salt Creek parcels. It was determined in the conference call that ACOE would provide an Unexploded Ordinance (UXO) monitor to perform anomaly avoidance at fence and sign installation locations within the FUDS area.

- A proposal for access control and cost estimate for fencing and gate installation along the Minnewawa Truck Trail was prepared and submitted to the POM on March 2, 2012.
- On April 4, 2012 Anna Bennett and Cailin O'Meara performed anomaly avoidance at the FUDS area with B.J. Allen, a UXO monitor for ACOE, to prepare for fence repair and sign installation activities.

Subtask 5a (FY 2011–12 and FY 2012-13): U.S. Customs and Border Protection

Dulzura Parcels: USCBP Barrier Installation

- On July 17, 2012 RECON met with USCBP (Otis Harper, Engineer Equipment Operator) on-site at the Dulzura parcels to discuss installation of barriers along the Minnewawa Truck Trail.
- USCBP installed barriers consisting of boulders and brush piles between July 17 and July 25, 2012.

Salt Creek Parcels: Road Closures

- On May 30, 2012 the POM, RECON, and USCBP (Sean Ford, Public Lands Liaison) met to discuss potential road closures within Salt Creek.
- After the meeting, RECON mapped duplicate roads and all-terrain vehicle trails within the Salt Creek parcels.

Additional USCBP Tasks

- RECON coordinated with the POM and Bureau of Land Management (BLM) (Greg Thomsen, Special Projects Manager) regarding quarterly San Diego Border Management Task Force meetings. It was determined that the POM would attend the quarterly meetings.

Subtask 5b (FY 2011–12 and FY 2012–13): Fence and Sign Installation

Fencing and signs were installed at the Salt Creek, San Ysidro, and Dulzura parcels primarily to limit damages to sensitive habitat from off-road vehicle use.

San Ysidro

- A total of 70 linear feet of fencing was installed at San Ysidro to block vehicles from damaging QCB occupied habitat (Attachment 5: Photographs 2–3).

Dulzura

- A total of nine signs were installed at the Dulzura parcels.
- USCBP installed boulders and brush piles to limit access to illegal roads within the parcels.

Salt Creek

- A total of 1,336 linear feet of fencing were installed at Salt Creek. Fencing was installed to protect vernal pools and dot-seed plantain adjacent to a main dirt access road in the southeastern portion of the parcel. Fencing was also installed along the southern boundary of the FUDS area.
- Fencing (less than 50 feet in length) along the eastern boundary fence at Salt Creek was repaired after being damaged.
- A total of 13 signs were installed at access roads into the parcels.

Subtask 5c (FY 2012–13): Law Enforcement

Notable activities that were performed as part of law enforcement include:

- A request for law enforcement at the Salt Creek and Dulzura parcels was submitted to SDMMMP on February 6, 2012.
- The request for law enforcement was approved for CDFW warden enforcement; the SDMMMP contract with the San Diego County Sheriff's Department has not been executed.
- A site visit to discuss access issues and law enforcement at the Salt Creek and Dulzura parcels was attended by CDFW warden, Travis Vuich, and the POM and RECON on December 14, 2012.

Task 6: Invasive Plant Treatment

Subtask 7a (FY 2011–12) and 6a (FY 2012–13): Vegetation Treatment/Removal

Invasive plant species, including stinkwort (*Dittrichia graveolens*), were monitored throughout the Preserve in 2012. Invasive plant infestations are shown on Attachment 3: Figures 18 and 19. RECON crew treated stinkwort with herbicide at Salt Creek in June. Additional treatment included removing individuals by hand at the Salt Creek, San Ysidro, and Northern San Ysidro parcels during July and August 2012.

- A total of 1,319 stinkwort individuals were removed by hand in 2012; of these 587 were at Salt Creek, 73 at San Ysidro, 514 at Northern San Ysidro, and 145 individuals in the shared San Ysidro/Northern San Ysidro drainage.

- Approximately 2.27 acres in the Salt Creek parcel were treated with herbicide in June.

4.0 Future Tasks to be Performed

For the time frame of January 1 through June 30, 2013, the following tasks from the FY 2012–13 Annual Work Plan are anticipated:

- Baseline Surveys (Subtask 1b) at the Wolf Canyon parcels and Proctor Valley (South) and Proctor Valley (North) parcels, if conveyed
- QCB Surveys (Subtask 1c) in the FUDS area at the Salt Creek parcels
- LBV 2013 Surveys (Subtask 1e) at the Salt Creek parcels, including the FUDS area
- Brown-Headed Cowbird Trapping 2013 (Subtask 1f) at the Salt Creek parcels
- Focused Rare Plant Surveys (Subtask 1g) at the Jamul Mountains, Dulzura, Northern San Ysidro, McMillin, Little Cedar Canyon, and the FUDS within the Salt Creek parcels
- Fairy Shrimp Surveys (Subtask 1h) at the Salt Creek parcels
- Vernal Pool Plant Surveys (Subtask 1i) at the Salt Creek parcels
- Plant Voucher Collection (Subtask 1j) at the Northern San Ysidro, San Ysidro, Salt Creek including the FUDS, Wolf Canyon, Little Cedar Canyon, McMillin, Jamul, and Dulzura parcels
- QCB Pre-Survey Notification Letter (Subtask 4b) for the 2013 QCB surveys at the FUDS area within the Salt Creek parcels
- QCB Post-Survey Report (Subtask 4c) for the 2013 QCB surveys at the FUDS area within the Salt Creek parcels
- Fairy Shrimp Post-Survey Report (Subtask 4g) for the 2013 fairy shrimp surveys at the Salt Creek parcels
- Database Contributions (Subtask 4j) to CNDDDB and SanBIOS for the data collected during the FY 2011–12 surveys and to the Multi-Taxa Database for data that were collected in the FY 2009–10, FY 2010–11, and FY 2011–12 surveys
- FY 2013–14 Annual Work Plan (Subtask 4k) for all tasks to be completed within the Otay Ranch Preserve between July 1, 2013 and June 30, 2014

Tasks to be performed between July 1 and December 31, 2013 will be proposed in the draft FY 2013–14 Annual Work Plan which will be submitted to the POM on February 1, 2013. All Land Stewardship (Subtask 2a), Meetings and Coordination (Subtasks 3a–3d),

Access Control (Subtasks 5a–5c), and Invasive Plant Treatment (Subtask 7a) tasks are considered on-going and will continue through the end of FY 2012–13.

5.0 References Cited

California Department of Fish and Wildlife ([CDFW]; formerly California Department of Fish and Game [CDFG])

- 2011 Natural Diversity Data Base. Special Animals List (online edition). January. Accessed September 2012 from http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

California Native Plant Society (CNPS)

- 2012 Inventory of Rare, Threatened, and Endangered Plants of California (8th Edition).

Chula Vista, City of

- 2003 City of Chula Vista Multiple Species Conservation Program Subarea Plan. February 2003.

Consortium of California Herbaria

- 2012 Data provided by the participants of the Consortium of California Herbaria Accessed July 2012 from <http://www.ucjeps.berkeley.edu/consortium>.

RECON

- 2011 2011–12 Annual Work Plan for Otay Ranch Conveyed Lands Managed by the Otay Ranch Preserve Owner/Manager. December 14, 2011.
- 2012a 2012–13 Annual Work Plan for Otay Ranch Conveyed Lands Managed by the Otay Ranch Preserve Owner/Manager. July 2, 2012.
- 2012b 2010–11 Baseline Survey Report for the Northern San Ysidro, McMillin, and Little Cedar Canyon Parcels of the Otay Ranch Preserve. January 3, 2012.
- 2012c 2010–11 Baseline Survey Report for the Jamul Mountains Parcels of the Otay Ranch Preserve. January 3, 2012.
- 2012d 2010–11 Baseline Survey Report for the Dulzura Parcels of the Otay Ranch Preserve. January 3, 2012.
- 2012e Pre-Survey Notification of Focused Surveys for Quino Checkerspot Butterfly at Otay Ranch Preserve, San Diego County – Request for Waiver of 15-Day Notification (RECON Number 5256). Submitted to ~~Ms.~~ Susie Tharratt, USFWS. February 3, 2012.

- 2012f Otay Ranch Preserve – Dulzura Parcels: 2012 Quino Checkerspot Butterfly Presence/Absence Survey Report. May 4, 2012.
- 2012g Otay Ranch Preserve – Jamul Mountains Parcels: 2012 Quino Checkerspot Butterfly Presence/Absence Survey Report. May 4, 2012.
- 2012h Otay Ranch Preserve – Northern San Ysidro, McMillin, and Little Cedar Canyon Parcels: 2012 Quino Checkerspot Butterfly Presence/Absence Survey Report. May 4, 2012.
- 2012i January 1–April 30, 2012 Biannual Report for the Otay Ranch Preserve FY 2011-12. May 31, 2012.
- 2012j 2011 Annual Report for the Otay Ranch Preserve. January 23, 2012.
- 2012k Draft Resource Management Plan/Multiple Species Conservation Program Consistency Analysis. June 29, 2012.
- 2012l 2012 Baseline Survey Report for the Salt Creek Formerly Used Defense Site and Northern Salt Creek Parcel of the Otay Ranch Preserve. September 14, 2012.
- 2012m Pre-Survey Notification of Wet Season Fairy Shrimp at Otay Ranch Preserve – Salt Creek Parcels, City of Chula Vista, San Diego County (RECON Number 5256). Submitted to ~~Ms.~~ Susie Tharratt, USFWS. October 15, 2012.
- 2012n Bi-annual Report for Otay Ranch Preserve May 1–August 31, 2012. September 28, 2012.

San Diego Association of Governments (SANDAG)

- 2011 Vegetation Classification Manual for Western San Diego County. February, 2011.

San Diego, County of

- 1995 Otay Ranch Phase 2 Resource Management Plan. August 31, 1995.
- 1997 Multiple Species Conservation Program County of San Diego Subarea Plan. October, 1997.
- 2002 Otay Ranch Phase 1 Resource Management Plan. June 4, 1996. Revised August 7, 2002.

San Diego Natural History Museum

- 2012 Least Bell's Vireo (*Vireo bellii pusillus*) Surveys and Nest Monitoring at the Salt Creek Parcels of the Otay Ranch Preserve, City of Chula Vista, County of San Diego. September 10, 2012.

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens

- 2009 A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento.

TW Biological Services

- 2012 2012 Otay Ranch Preserve Brown-Headed Cowbird Trapping Program. September 10, 2012.

U.S. Fish & Wildlife Service (USFWS)

- 1996 Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods. April 19, 1996.

ATTACHMENTS

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ATTACHMENT 1
Plant Species Observed at Otay Ranch Preserve
May 1–August 31, 2012

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ATTACHMENT 1
PLANT SPECIES OBSERVED AT OTAY RANCH PRESERVE
January 1–December 31, 2012

Scientific Name	Common Name	Observed	Sensitivity	Origin
LYCOPODS				
SELAGINELLACEAE	SPIKE-MOSS FAMILY			
<i>Selaginella cinerascens</i> A.A. Eaton	ashy spike-moss	FUDS, NSC	RMP, CNPS 4.1	N
FERNS				
ASPLENIACEAE	SPLEENWORT FAMILY			
<i>Asplenium vespertinum</i> Maxon	western spleenwort	NSY	CNPS 4.2	N
GYMNOSPERMS				
CUPRESSACEAE	CYPRESS FAMILY			
<i>Hesperocyparis forbesii</i> (Jeps.) Bartel [= <i>Callitropsis forbesii</i>]	Tecate cypress	NSY, MCM, FUDS	CNPS 1B.1	N
ANGIOSPERMS: MONOCOTS				
ALLIACEAE	ONION FAMILY			
<i>Allium</i> sp.	onion, garlic	NSY, LCC	-	N
<i>Allium haematochiton</i> S. Watson	redskin onion	DLZ	-	N
<i>Allium praecox</i> Brandegees	common wild onion	DLZ	-	N
ARECACEAE	PALM FAMILY			
<i>Washingtonia robusta</i> H. Wendl.	Washington fan palm	FUDS, NSC	-	I
IRIDACEAE	IRIS FAMILY			
<i>Sisyrinchium bellum</i> S. Watson	blue-eyed grass	JM	-	N
JUNCACEAE	RUSH FAMILY			
<i>Juncus acutus</i> L. ssp. <i>leopoldii</i> (Parl.) Snogerup	spiny rush	FUDS, NSC	RMP, CNPS 4.2	N
LILIACEAE	LILY FAMILY			
<i>Fritillaria biflora</i> Lindl.	chocolate lily, mission bells	MCM	-	N
POACEAE (GRAMINEAE)	GRASS FAMILY			
<i>Arundo donax</i> L.	giant reed	FUDS	-	I
<i>Bromus diandrus</i> Roth	ripgut grass	WC	-	I

ATTACHMENT 1
PLANT SPECIES OBSERVED AT OTAY RANCH PRESERVE
January 1–December 31, 2012

Scientific Name	Common Name	Observed	Sensitivity	Origin
<i>Bromus madritensis</i> L. ssp. <i>rubens</i> (L.) Husnot	red brome	WC, FUDS, NSC	-	I
<i>Cortaderia selloana</i> (Schant. & Schult. f.) Asch. & Graebn.	pampas grass	FUDS, NSC, LCC	-	I
<i>Cynodon dactylon</i> (L.) Pers.	Bermuda grass	FUDS	-	I
<i>Nassella</i> sp.	needlegrass	WC	-	N
<i>Piptatherum</i> [= <i>Oryzopsis</i>] <i>miliaceum</i> (L.) Coss.	smilo grass	FUDS	-	I
TYPHACEAE	CATTAIL FAMILY			
<i>Typha</i> sp.	cattail	WC	-	N
ANGIOSPERMS: DICOTS				
ANACARDIACEAE	SUMAC OR CASHEW FAMILY			
<i>Rhus integrifolia</i> (Nutt.) Benth. & Hook. f. ex Rothr.	lemonadeberry	WC	-	N
<i>Schinus molle</i> L.	Peruvian pepper tree	WC, FUDS	-	I
<i>Toxicodendron diversilobum</i> (Torr. & A. Gray) Greene	western poison oak	JM		N
APIACEAE (UMBELLIFERAE)	CARROT FAMILY			
<i>Foeniculum vulgare</i> Mill.	fennel	WC, NSY, JM	-	I
APOCYNACEAE	DOGBANE FAMILY			
<i>Apocynum cannabinum</i> L.	Indian hemp	SC	-	N
ASTERACEAE	SUNFLOWER FAMILY			
<i>Ambrosia</i> [= <i>Hymenoclea</i>] <i>monogyra</i> (A. Gray) Strother & B.G. Baldwin	singlewhorl burrobrush	FUDS	CNPS 2.2	N
<i>Artemisia californica</i> Less.	California sagebrush	WC	-	N
<i>Bahiopsis</i> [= <i>Viguiera</i>] <i>laciniata</i> (A. Gray) E.E. Schilling & Panero	San Diego County viguiera	WC, FUDS, NSC	RMP, CNPS 4.2	N
<i>Carduus pycnocephalus</i> L.	Italian thistle	WC, FUDS	-	I
<i>Centaurea melitensis</i> L.	tocalote, star-thistle	WC	-	I
<i>Cynara cardunculus</i> L.	cardo, artichoke thistle	JM	-	I
<i>Deinandra</i> [= <i>Hemizonia</i>] <i>conjugens</i> (D.D. Keck) B.G. Baldwin	Otay tarplant	NSC	CE/FT, RMP, MSCP NE/4-1, CNPS 1B.1	N
<i>Dittrichia graveolens</i> (L.) Greuter	stinkwort	NSY, SY, SC	-	I
<i>Encelia californica</i> Nutt.	common encelia	WC	-	N
<i>Ericameria palmeri</i> (A. Gray) H.M. Hall var. <i>palmeri</i>	Palmer's goldenbush	DLZ	MSCP NE/4-2, CNPS 1B.1	N
<i>Gazania linearis</i> (Thunb.) Druce	treasure flower	JM	-	I

ATTACHMENT 1
PLANT SPECIES OBSERVED AT OTAY RANCH PRESERVE
January 1–December 31, 2012
(continued)

Scientific Name	Common Name	Observed	Sensitivity	Origin
<i>Glebionis coronaria</i> (L.) Spach [= <i>Chrysanthemum coronarium</i>]	garland, crown daisy	WC	-	I
<i>Pseudognaphalium californicum</i> (DC.) Anderb.	green everlasting	LCC	-	N
<i>Gutierrezia</i> sp.	matchweed	WC	-	N
<i>Holocarpha virgata</i> (A. Gray) D.D. Keck ssp. <i>elongata</i> D.D. Keck	graceful tarplant	FUDS, NSC	CNPS 4.2	N
<i>Isocoma menziesii</i> (Hook. & Arn.) G.L. Nesom var. <i>decumbens</i> (Greene) G.L. Nesom	decumbent goldenbush	FUDS, NSC	CNPS 1B.2	N
<i>Iva hayesiana</i> A. Gray	San Diego marsh-elder	FUDS, NSC	RMP 2.2	N
<i>Lasthenia gracilis</i> (DC.) Greene	common goldfields	DLZ	-	N
<i>Pluchea odorata</i> (L.) Cass.	salt marsh fleabane	WC	-	N
<i>Pseudognaphalium</i> sp.	everlasting	MCM, JM	-	N
<i>Silybum marianum</i> (L.) Gaertn.	milk thistle	FUDS	-	I
<i>Stephanomeria</i> sp.	stephanomeria	MCM, LCC, DLZ	-	N
BORAGINACEAE	BORAGE FAMILY			
<i>Amsinckia menziesii</i> (Lehm.) A. Nelson & J.F. Macbr. var. <i>intermedia</i>	rancher's fireweed	DLZ	-	N
<i>Eucrypta chrysanthemifolia</i>	eucrypta	JM	-	N
<i>Harpagonella palmeri</i> A. Gray	Palmer's grapplinghook	FUDS, NSC	RMP, CNPS 4.2	N
<i>Pectocarya</i> sp.	comb-bur	MCM, JM	-	N
<i>Phacelia distans</i> Benth.	wild-heliotrope	DLZ	-	N
<i>Plagiobothrys</i> sp.	popcornflower	LCC, DLZ, JM	-	N
BRASSICACEAE (CRUCIFERAE)	MUSTARD FAMILY			
<i>Brassica nigra</i> (L.) W.D.J. Koch	black mustard	DLZ, JM	-	I
<i>Hirschfeldia incana</i> (L.) Lagr.-Fossat	short-pod mustard	WC	-	I
<i>Lepidium</i> sp.	peppergrass	DLZ	-	N
<i>Lepidium latifolium</i> L.	perennial pepperweed	FUDS, NSC	-	I
<i>Raphanus sativus</i> L.	radish	DLZ	-	I
CACTACEAE	CACTUS FAMILY			
<i>Cylindropuntia californica</i> (Torr. & A. Gray) F.M. Knuth var. <i>californica</i>	snake cholla	NSC	RMP, MSCP NE/4-1, CNPS 1B.1	N
<i>Ferocactus viridescens</i> (Torr. & A. Gray) Britton & Rose	San Diego barrel cactus	FUDS, NSC	RMP, MSCP 4-1, CNPS 2.1	N

ATTACHMENT 1
PLANT SPECIES OBSERVED AT OTAY RANCH PRESERVE
January 1–December 31, 2012

Scientific Name	Common Name	Observed	Sensitivity	Origin
CRASSULACEAE	STONECROP FAMILY			
<i>Dudleya variegata</i> (S. Watson) Moran	variegated dudleya	FUDS	RMP, MSCP NE/4-1, CNPS 1B.2	N
CUCURBITACEAE	GOURD FAMILY			
<i>Cucurbita foetidissima</i> Kunth	calabazilla	WC	-	N
ERICACEAE	HEATH FAMILY			
<i>Arctostaphylos otayensis</i> Weisl. & B. Schreib.	Otay manzanita	FUDS	RMP, MSCP 4-3, CNPS 1B.2	N
EUPHORBIACEAE	SPURGE FAMILY			
<i>Chamaesyce</i> sp.	prostrate spurge	NSC	-	N
<i>Ricinus communis</i> L.	castor bean	WC	-	I
FABACEAE	PEA FAMILY			
<i>Acemispia americanus</i> (Nutt.) Rydb. var. <i>americanus</i> [= <i>Lotus purshianus</i> var. <i>purshianus</i>]	Spanish-clover	LCC	-	N
<i>Pickeringia montana</i> Nutt.	chaparral pea	MCM	CNPS 4.3	N
FAGACEAE	OAK FAMILY			
<i>Quercus berberidifolia</i> Liebm.	scrub oak	JM	-	N
GERANIACEAE	GERANIUM FAMILY			
<i>Erodium botrys</i> (Cav.) Bertol.	long-beak filaree	MCM, LCC, JM	-	I
LAMIACEAE	MINT FAMILY			
<i>Monardella stoneana</i> Elvin & A. C. Sanders	Jennifer's monardella	NSY	CNPS 1B.2	N
<i>Salvia mellifera</i> Greene	black sage	LCC, JM	-	N
<i>Salvia munzii</i> Epling	Munz's sage	FUDS, NSC	RMP, CNPS 2.2	N
MALVACEAE	MALLOW FAMILY			
<i>Malacothamnus fasciculatus</i> (Nutt. ex Torr. & A. Gray) Greene	chaparral mallow	LCC, JM	-	N
MONTIACEAE	MONTIA FAMILY			
<i>Calandrinia breweri</i> S. Watson	Brewer's red maid	JM	4.2	N
<i>Calandrinia ciliata</i> (Ruiz & Pav.) DC.	red maids	MCM, DLZ, JM	-	N
<i>Claytonia perfoliata</i> Willd.	miner's lettuce	DLZ	-	N
ONAGRACEAE	EVENING-PRIMROSE FAMILY			
<i>Epilobium canum</i> (Greene) P.H. Raven ssp. <i>canum</i>	California fuchsia, zauschneria	JM	-	N

ATTACHMENT 1
PLANT SPECIES OBSERVED AT OTAY RANCH PRESERVE
January 1–December 31, 2012
(continued)

Scientific Name	Common Name	Observed	Sensitivity	Origin
OXALDIACEAE	OXALIS FAMILY			
<i>Oxalis californica</i> (Adams) R. Knuth [= <i>Oxialis albicans</i> ssp. <i>californica</i>]	California oxalis	MCM, JM	-	N
PAPAVERACEAE	POPPY FAMILY			
<i>Eschscholzia californica</i> Cham.	California poppy	MCM, JM	-	N
PLANTAGINACEAE	PLANTAIN FAMILY			
<i>Plantago erecta</i> E. Morris	dot-seed plantain	LCC, DLZ, JM	-	N
<i>Stemodia durantifolia</i> (L.) Sw.	blue streamwort	FUDS	CNPS 2.1	N
POLEMONIACEAE	PHLOX FAMILY			
<i>Navarretia fossalis</i> Moran	spreading navarretia	FUDS	FT, RMP, MSCP 4-2, CNPS 1B.1	N
<i>Linanthus dianthiflorus</i> (Benth.) Greene	farinose ground pink	JM	-	N
POLYGONACEAE	BUCKWHEAT FAMILY			
<i>Chorizanthe polygonoides</i> Torr. & A. Gray var. <i>longispina</i> (Goodman) Munz	long-spined spineflower	NSC	CNPS 1B.2	N
<i>Eriogonum fasciculatum</i> Benth.	California buckwheat	WC	-	N
PRIMULACEAE	PRIMROSE FAMILY			
<i>Dodecatheon clevelandii</i> Greene ssp. <i>clevelandii</i>	shooting star, wild cyclamen	DLZ, JM	-	N
RANUNCULACEAE	BUTTERCUP FAMILY			
<i>Clematis pauciflora</i> Nutt.	ropevine	DLZ	-	N
RHAMNACEAE	BUCKTHORN FAMILY			
<i>Ceanothus otayensis</i> McMinn	Otay Mountain ceanothus	FUDS	CNPS 1B.2	N
<i>Ceanothus tomentosus</i> Parry	Ramona lilac	LCC	-	N
SALICACEAE	WILLOW FAMILY			
<i>Salix laevigata</i> Bebb	red willow	WC	-	N
SCROPHULARIACEAE	FIGWORT FAMILY			
<i>Castilleja affinis</i> Hook. & Arn. ssp. <i>affinis</i>	coast paintbrush	DLZ, JM	-	N
<i>Castilleja exserta</i> (A.A. Heller) T.I. Chuang & Heckard	purple owl's clover	JM	-	N
<i>Cordylanthus rigidus</i> (Benth.) Jeps. ssp. <i>setigerus</i> T.I. Chuang & Heckard	thread-leaved bird's-beak	DLZ	-	N

ATTACHMENT 1
PLANT SPECIES OBSERVED AT OTAY RANCH PRESERVE
January 1–December 31, 2012

Scientific Name	Common Name	Observed	Sensitivity	Origin
SIMMONDSIACEAE	JOJOBA FAMILY			
<i>Simmondsia chinensis</i> (Link) C.K. Schneid.	jojoba, goat nut	WC	-	N
SOLANACEAE	NIGHTSHADE FAMILY			
<i>Nicotiana glauca</i> Graham	tree tobacco	WC	-	I
<i>Solanum parishii</i> A. Heller	Parish's nightshade	LCC	-	N
TAMARICACEAE	TAMARISK FAMILY			
<i>Tamarix ramosissima</i> Ledeb.	saltcedar	FUDS, NSC	-	I

Note: Species were observed during baseline surveys, QCB surveys, and site visits and documented in RECON 2012f–i.

FEDERAL CANDIDATES AND LISTED SPECIES

FE = Federally listed endangered
 FT = Federally listed threatened
 FPT = Federally proposed (Threatened)

STATE LISTED SPECIES

CE = State listed endangered
 CR = State listed rare
 CT = State listed threatened
 FP = CDFW fully protected species
 SSC = CDFW species of special concern
 WL = CDFW watch list species

CALIFORNIA NATIVE PLANT SOCIETY RARE PLANT RANKING

1A = Species presumed extinct.
 1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.
 2 = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
 3 = Species for which more information is needed. Distribution, endangerment, and/or taxonomic information is needed.
 4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.
 .1 = Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
 .2 = Species fairly threatened in California (20–80% occurrences threatened; moderate degree and immediacy of threat)
 .3 = Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known)
 CBR = Considered but rejected
 NA = Not applicable

COUNTY OF SAN DIEGO

RMP = Otay Ranch Preserve Phase 1 & Phase 2 Resource Management Plans

CITY OF CHULA VISTA MSCP

NE = Narrow endemic
 4-1 = Species adequately conserved (Table 4-1)
 4-2 = Species with known occurrences or suitable habitat within *Chula Vista Subarea* (Table 4-2)
 4-3 = Species not likely to be found in the *Chula Vista Subarea* (Table 4-3)
ORIGIN

ATTACHMENT 1
PLANT SPECIES OBSERVED AT OTAY RANCH PRESERVE
January 1–December 31, 2012
(continued)

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

PARCEL(S)

DLZ = Dulzura
FUDS = Formerly Used Defense Site
JM = Jamul Mountains
LCC = Little Cedar Canyon
MCM = McMillin
NSC = Northern Salt Creek
NSY = Northern San Ysidro
SC = Salt Creek
SY = San Ysidro
WC = Wolf Canyon

Nomenclature from:

Brenzel, K. N. (editor)

2001 *Sunset Western Garden Book*. Sunset Publishing Corporation, Menlo Park, CA.

Rebman, John P. and Michael G. Simpson.

2006 Checklist of the Vascular Plants of San Diego County, 4th edition. San Diego Natural History Museum.

University of California

2012 The Jepson Online Interchange. Accessed September 2012 from <http://ucjeps.berkeley.edu/interchange.html>.

U.S. Department of Agriculture (USDA)

2008 Natural Resources Conservation Service Plants Database <http://plants.usda.gov/>.

ATTACHMENT 1
PLANT SPECIES OBSERVED AT OTAY RANCH PRESERVE
January 1–December 31, 2012

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ATTACHMENT 2
Wildlife Species Observed/Detected at
Otay Ranch Preserve
May 1–August 31, 2012

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ATTACHMENT 2
WILDLIFE SPECIES OBSERVED/DETECTED AT THE OTAY RANCH PRESERVE
January 1–December 31, 2012

Scientific Name	Common Name	Observed	Sensitivity	Seasonality (Birds Only)	Evidence of Occurrence
INVERTEBRATES					
ARCTIIDAE	TIGER MOTHS				
<i>Pyrrharctia</i> sp.	tiger moth	DLZ	-	-	O
CTENIZIDAE	TRAPDOOR SPIDERS				
<i>Bothriocyrtum californicum</i>	trapdoor spider	MCM	-	-	O
HESPERIIDAE	SKIPPERS				
<i>Erynnis propertius</i>	propertius duskywing	DLZ	-	-	O
<i>Erynnis funeralis</i>	funereal duskywing	JM	-	-	O
LYCAENIDAE	BLUES, COPPERS, & HAIRSTREAKS				
<i>Brephidium exile</i>	Western pygmy blue	MCM, DLZ, WC	-	-	O
<i>Callophrys augustinus iroides</i>	brown elfin	DLZ	-	-	O
<i>Callophrys dumetorum</i>	bramble or coastal green hairstreak	JM	-	-	O
<i>Glaucopsyche lygdamus australis</i>	southern or silvery blue	LCC, JM	-	-	O
<i>Mitoura thornei</i>	Thorne's hairstreak butterfly	FUDS	RMP, MSCP 4-3	-	O
<i>Plebejus acmon</i>	acmon blue	MCM	-	-	O
<i>Strymon melinus pudica</i>	common or gray hairstreak	DLZ	-	-	O

ATTACHMENT 2
WILDLIFE SPECIES OBSERVED/DETECTED AT THE OTAY RANCH PRESERVE
January 1–December 31, 2012

Scientific Name	Common Name	Observed	Sensitivity	Seasonality (Birds Only)	Evidence of Occurrence
NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES				
<i>Coenonympha tullia californica</i>	California or common ringlet	LCC, DLZ	-	-	O
<i>Euphydryas editha quino</i>	Quino checkerspot	NSY, MCM, DLZ, JM	FE, RMP, MSCP 4-1	-	O
<i>Vanessa annabella</i>	west coast lady	JM	-	-	O
<i>Vanessa atalanta rubria</i>	red admiral	DLZ	-	-	O
<i>Vanessa cardui</i>	painted lady	NSY, LCC, DLZ, JM, WC	-	-	O
PAPILIONIDAE	PARNASSIANS & SWALLOWTAILS				
<i>Papilio rutulus</i>	western tiger swallowtail	DLZ, JM	-	-	O
<i>Papilio zalicaon</i>	anise swallowtail	MCM	-	-	O
PIERIDAE	WHITES & SULPHURS				
<i>Anthocharis sara</i>	sara or Pacific orangetip	JM	-	-	O
RIODINIDAE	METALMARKS				
<i>Apodemia mormo virgulti</i>	Behr's metalmark	LCC, DLZ	-	-	O
SALTICIDAE	JUMPING SPIDERS				
<i>Phiddipus</i> sp.	jumping spider	MCM	-	-	O
	AMPHIBIANS				
HYLIDAE	TREE FROGS				
<i>Pseudacris regilla</i>	Pacific treefrog	JM	-	-	V
	REPTILES				
ANGUIDAE	ALLIGATOR LIZARDS				
<i>Elgaria multicarinata webbia</i>	San Diego alligator lizard	JM	-	-	O

ATTACHMENT 2
WILDLIFE SPECIES OBSERVED/DETECTED AT THE OTAY RANCH PRESERVE
January 1–December 31, 2012
(continued)

Scientific Name	Common Name	Observed	Sensitivity	Seasonality (Birds Only)	Evidence of Occurrence
IGUANIDAE	IGUANID LIZARDS				
<i>Phrynosoma blainvillii</i>	coast horned lizard	NSY, MCM, JM	SSC, RMP, MSCP 4-2	-	O
<i>Uta stansburiana</i>	common side-blotched lizard	WC	-	-	O
TEIIDAE	WHIPTAIL LIZARDS				
<i>Aspidoscelis hyperythra beldingi</i>	Belding's orange-throated whiptail	FUDS	SSC, RMP, MSCP 4-2	-	O
CROTALIDAE	RATTLESNAKES				
<i>Crotalus ruber</i>	red diamond rattlesnake	NSY, FUDS, NSC	SSC, RMP	-	O
BIRDS					
ODONTOPHORIDAE	NEW WORLD QUAIL				
<i>Callipepla californica californica</i>	California quail	SC, SY, JM, WC	-	Y	O
ACCIPITRIDAE	HAWKS, KITES, & EAGLES				
<i>Accipiter cooperii</i>	Cooper's hawk	FUDS, JM	WL, RMP, MSCP 4-2	Y	O
<i>Aquila chrysaetos canadensis</i>	golden eagle	MCM	FP, WL, RMP, MSCP 4-2	Y	O
<i>Buteo jamaicensis</i>	red-tailed hawk	SC, WC, FUDS, NSY, JM	RMP	Y	O
<i>Elanus leucurus</i>	white-tailed kite	FUDS, NSY, MCM	FP, RMP	Y	O
FALCONIDAE	FALCONS & CARACARAS				
<i>Falco sparverius sparverius</i>	American kestrel	SC, SY, FUDS	RMP	Y	O
CHARADRIIDAE	LAPWINGS & PLOVERS				
<i>Charadrius vociferus vociferus</i>	Killdeer	SC	-	Y	O

ATTACHMENT 2
WILDLIFE SPECIES OBSERVED/DETECTED AT THE OTAY RANCH PRESERVE
January 1–December 31, 2012

Scientific Name	Common Name	Observed	Sensitivity	Seasonality (Birds Only)	Evidence of Occurrence
COLUMBIDAE	PIGEONS & DOVES				
<i>Zenaida macroura marginella</i>	mourning dove	SC, SY, WC	-	Y	O
CUCULIDAE	CUCKOOS & ROADRUNNERS				
<i>Coccyzus americanus</i>	western yellow-billed	SC	CE, RMP	S	O
<i>occidentalis</i>	cuckoo				
<i>Geococcyx californianus</i>	greater roadrunner	MCM, SC	-	Y	O
TROCHILIDAE	HUMMINGBIRDS				
<i>Calypte anna</i>	Anna's hummingbird	SC, WC	-	Y	O
<i>Calypte costae</i>	Costa's hummingbird	SY	-	S	O
PICIDAE	WOODPECKERS & SAPSUCKERS				
<i>Picoides nuttallii</i>	Nuttall's woodpecker	SC	-	Y	O
TYRANNIDAE	TYRANT FLYCATCHERS				
<i>Tyrannus verticalis</i>	western kingbird	SC, WC	-	S	O
<i>Tyrannus vociferans</i>	Cassin's kingbird	SC	-	Y	O
<i>vociferans</i>					
VIREONIDAE	VIREOS				
<i>Vireo bellii pusillus</i>	least Bell's vireo	SC, FUDS, NSC	CE/FE, RMP, MSCP 4-1	S	V
CORVIDAE	CROWS, JAYS, & MAGPIES				
<i>Aphelocoma californica</i>	western scrub-jay	SC	-	Y	O
ALAUDIDAE	LARKS				
<i>Eremophila alpestris</i>	horned lark	SC	-	Y	O
HIRUNDINIDAE	SWALLOWS				
<i>Petrochelidon pyrrhonota</i>	cliff swallow	SC	-	S	O
<i>tachina</i>					

ATTACHMENT 2
WILDLIFE SPECIES OBSERVED/DETECTED AT THE OTAY RANCH PRESERVE
January 1–December 31, 2012
(continued)

Scientific Name	Common Name	Observed	Sensitivity	Seasonality (Birds Only)	Evidence of Occurrence
AEGITHALIDAE	BUSHTIT				
<i>Psaltirparus minimus minimus</i>	bushtit	SC, SY	-	Y	O
TROGLODYTIDAE	WRENS				
<i>Campylorhynchus</i>	San Diego cactus wren	Heard off-site adjacent to WC,	SSC, RMP,	Y	V
<i>brunneicapillus sandiegensis</i>		SC	MSCP 4-1		
<i>Salpinctes obsoletus obsoletus</i>	rock wren	MCM	-	Y	O
SYLVIIDAE	GNATCATCHERS				
<i>Poliopitila californica californica</i>	coastal California gnatcatcher	Heard off-site adjacent to WC, NSY, SC, FUDS, NSC	SSC, FT, RMP, MSCP 4-1	Y	V
TIMALIIDAE	BABBLERS				
<i>Chamaea fasciata henshawi</i>	wrentit	SC, WC	-	Y	O
MIMIDAE	MOCKINGBIRDS & THRASHERS				
<i>Toxostoma redivivum</i> <i>redivivum</i>	California thrasher	SC	-	Y	O
PARULIDAE	WOOD WARBLERS				
<i>Dendroica petechia</i>	yellow warbler	SC, FUDS, NSC, WC	SSC	S	V
<i>Icteria virens auricollis</i>	yellow-breasted chat	FUDS, NSC	SSC	Y	V
EMBERIZIDAE	EMBERIZIDS				
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	FUDS, NSC	WL, RMP, MSCP 4-1	Y	O
<i>Melospiza melodia</i>	song sparrow	SC	-	Y	O
<i>Pipilo crissalis</i>	California towhee	SC, SY, WC	-	Y	O
<i>Pipilo maculatus</i>	spotted towhee	SC, WC	-	Y	O
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	JM	-	W	O
CARDINALIDAE	CARDINALS & GROSBEAKS				
<i>Passerina caerulea salicaria</i>	blue grosbeak	SY	-	S	O

ATTACHMENT 2
WILDLIFE SPECIES OBSERVED/DETECTED AT THE OTAY RANCH PRESERVE
January 1–December 31, 2012

Scientific Name	Common Name	Observed	Sensitivity	Seasonality (Birds Only)	Evidence of Occurrence
ICTERIDAE		BLACKBIRDS & NEW WORLD			
		ORIOLES			
<i>Molothrus ater</i>	brown-headed cowbird	SC	-	Y	O
<i>Sturnella neglecta</i>	western meadowlark	WC	-	Y	V
FRINGILLIDAE		FINCHES			
<i>Carduelis psaltria</i>	lesser goldfinch	SC, WC	-	Y	O
<i>hesperophilus</i>					
<i>Carpodacus mexicanus</i>	house finch	SC, SY, WC	-	Y	O
<i>frontalis</i>					
MAMMALS					
(Nomenclature from Baker et al. 2003)					
LEPORIDAE		RABBITS & HARES			
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	MCM, FUDS, NSC, LCC, DLZ	SSC, RMP	-	O
<i>Sylvilagus audubonii</i>	desert cottontail	SC, WC	-	-	O
CANIDAE		CANIDS			
<i>Canis latrans</i>	Coyote	WC	-	-	O
CERVIDAE		DEER			
<i>Odocoileus hemionus</i>	mule deer	FUDS, NSC	MSCP 4-2	-	S

Note: Species were observed during baseline surveys, QCB surveys, and site visits and documented in RECON 2012f–i.

PARCELS

DLZ = Dulzura
FUDS = Formerly Used Defense Site
JM = Jamul Mountains
LCC = Little Cedar Canyon
MCM = McMillin
NSC = Northern Salt Creek
NSY = Northern San Ysidro
SC = Salt Creek

ATTACHMENT 2
WILDLIFE SPECIES OBSERVED/DETECTED AT THE OTAY RANCH PRESERVE
January 1–December 31, 2012
(continued)

SY = San Ysidro
WC = Wolf Canyon

FEDERAL CANDIDATES AND LISTED SPECIES

FE = Federally listed endangered
FT = Federally listed threatened

STATE LISTED SPECIES

CE = State listed endangered
FP = CDFW fully protected species
SSC = CDFW species of special concern
WL = CDFW watch list species

COUNTY OF SAN DIEGO

RMP = Otay Ranch Preserve Phase 1 & Phase 2 Resource Management Plans

CITY OF CHULA VISTA MSCP

4-1 = Species adequately conserved (Table 4-1)
4-2 = Species with known occurrences or suitable habitat within *Chula Vista Subarea* (Table 4-2)
4-3 = Species not likely to be found in the *Chula Vista Subarea* (Table 4-3)

SEASONALITY (birds only)

S = Spring/summer resident; probable breeder on-site or in vicinity
W = Winter visitor; does not breed locally
Y = Year-round resident; probable breeder on-site or in vicinity

EVIDENCE OF OCCURRENCE

O = Observed
S = Scat
V = Vocalization

ATTACHMENT 2
WILDLIFE SPECIES OBSERVED/DETECTED AT THE OTAY RANCH PRESERVE
January 1–December 31, 2012

Nomenclature from:

American Ornithologists' Union

1998 *Check-list of North American Birds*. 7th ed. American Ornithologists' Union, Washington, D.C.

Baker, R. J., L. C. Bradley, R. D. Bradley, J. W. Dragoo, M. D. Engstrom, R. S. Hoffmann, C. A. Jones, F. Reid, D. W. Rice, and C. Jones

2003 *Revised Checklist of North American Mammals North of Mexico*. Occasional Papers, Museum of Texas Tech University 229:1-24.

Crother, B. I., editor

2001 Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding. Society for the Study of Amphibians and Reptiles *Herpetological Circular* No. 29.

Crother, B. I., J. Boundy, J. A. Campbell, K. De Quieroz, D. Frost, D. M. Green, R. Highton, J. B. Iverson, R. W. McDiarmid, P. A. Meylan, T. W. Reeder, M. E. Seidel, J. W. Sites, Jr., S. G. Tilley, and D. B. Wake

2003 Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico: Update. *Herpetological Review* 34(3): 196-203.

Eriksen, Clyde, and Denton Belk

1999 *Fairy Shrimp of California's Puddles, Pools, and Playas*. Mad River Press, Eureka.

Garrett, K., and J. Dunn

1981 *Birds of Southern California: Status and Distribution*. Los Angeles Audubon Society, Artisan Press, Los Angeles.

Mattoni, R.

1990 *Butterflies of Greater Los Angeles*. Center for the Conservation of Biodiversity/ Lepidoptera Research Foundation, Beverly Hills, CA.

Milne, L. and M. Milne

1980 *The Audubon Society Field Guide to North American Insects and Spiders*. New York: Alfred A. Knopf, Inc.

Opler, P. A., and A. B. Wright

1999 *A Field Guide to Western Butterflies*. Peterson Field Guides. Houghton Mifflin, Boston.

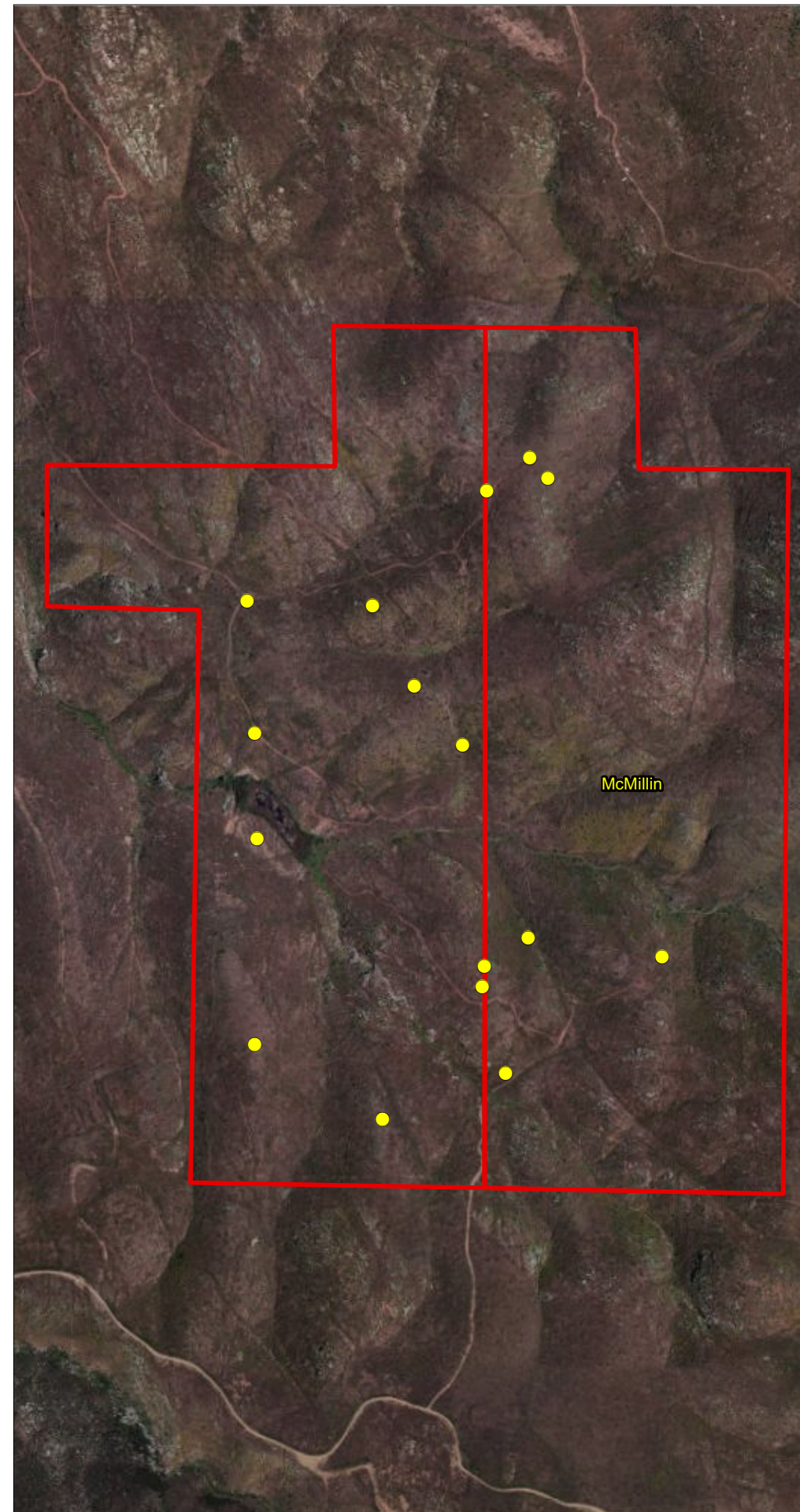
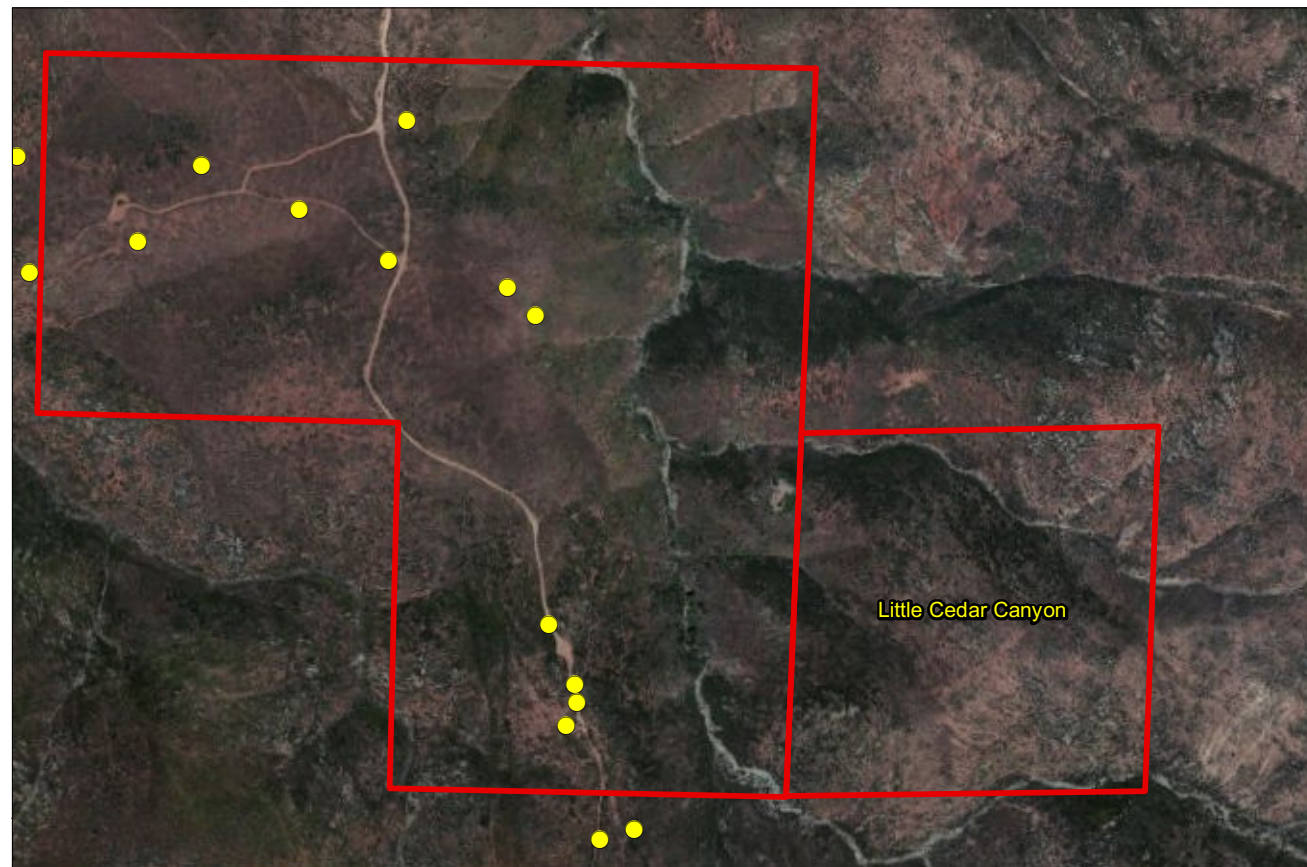
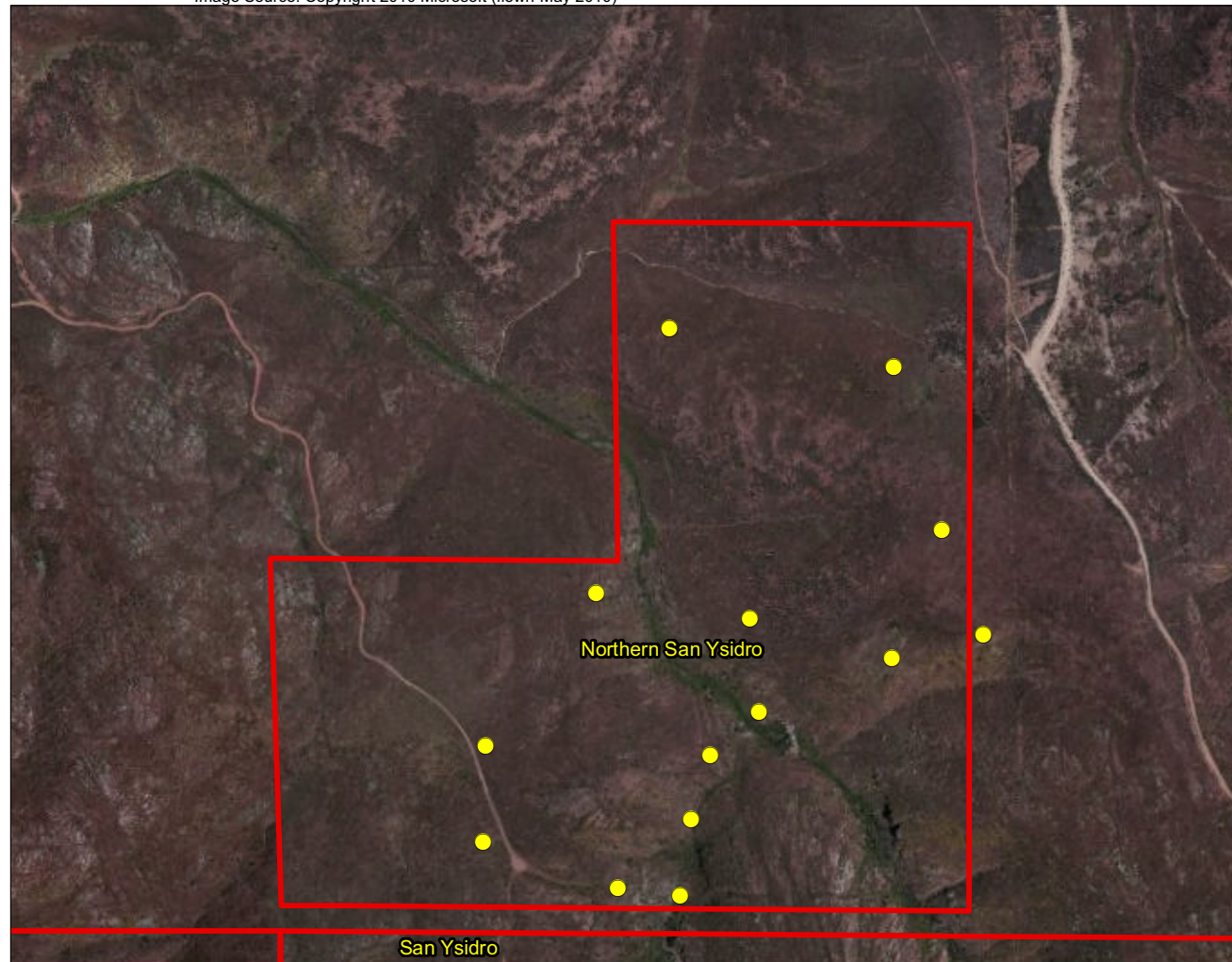
Unitt, P.



2004 *San Diego County Bird Atlas*. San Diego Natural History Museum and Ibis Publishing, San Diego.

ATTACHMENT 3

Figures 4–19

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-  Conveyed Land Under POM Management as of March 2012
-  Photographic Monitoring Locations

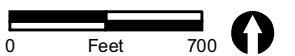
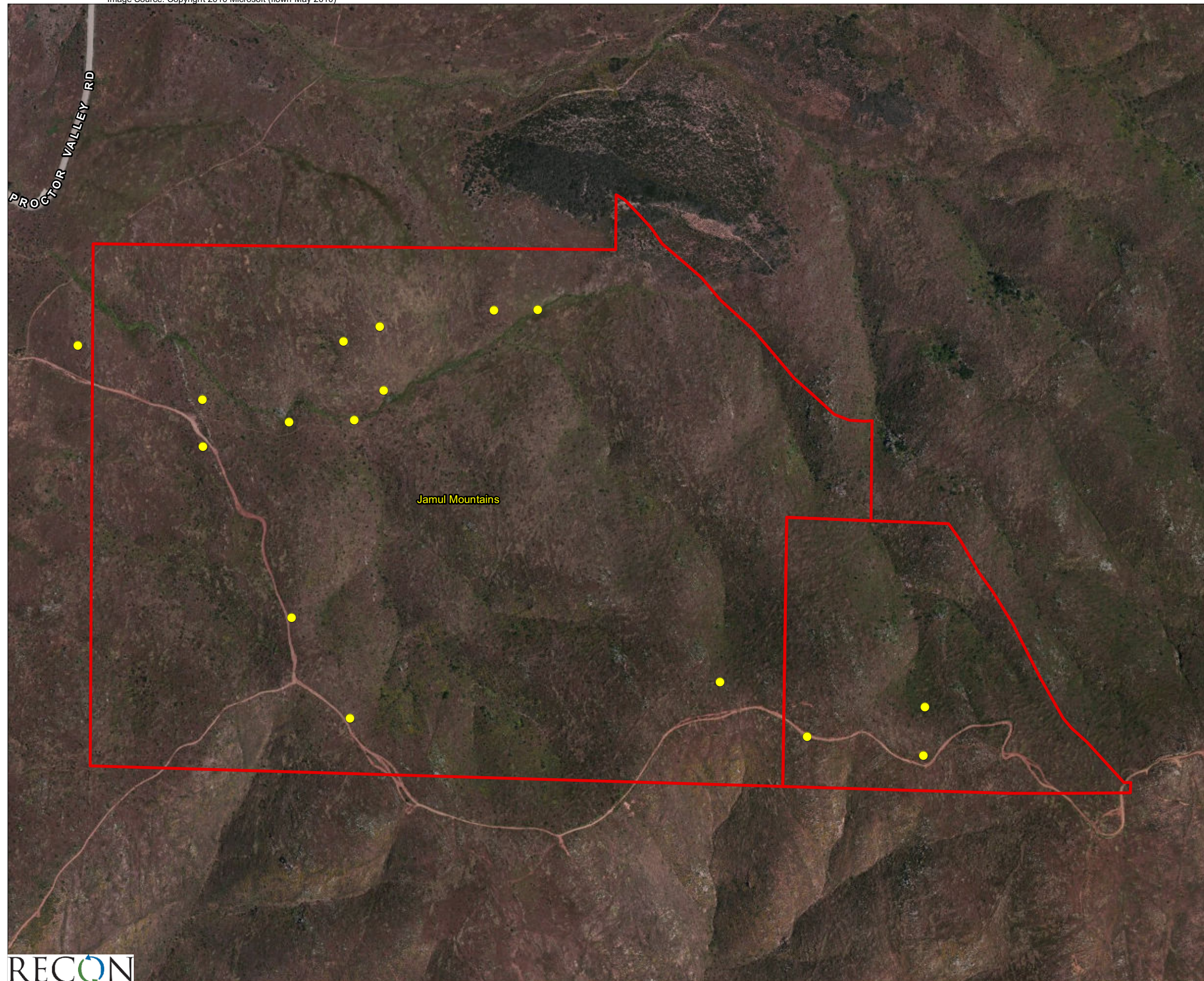




FIGURE 4
Photographic Monitoring Locations at the
Northern San Ysidro, McMillin, and Little
Cedar Canyon Parcels, Otay Ranch Preserve



-  Conveyed Land Under POM Management as of March 2012
-  Photographic Monitoring Locations

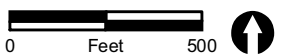
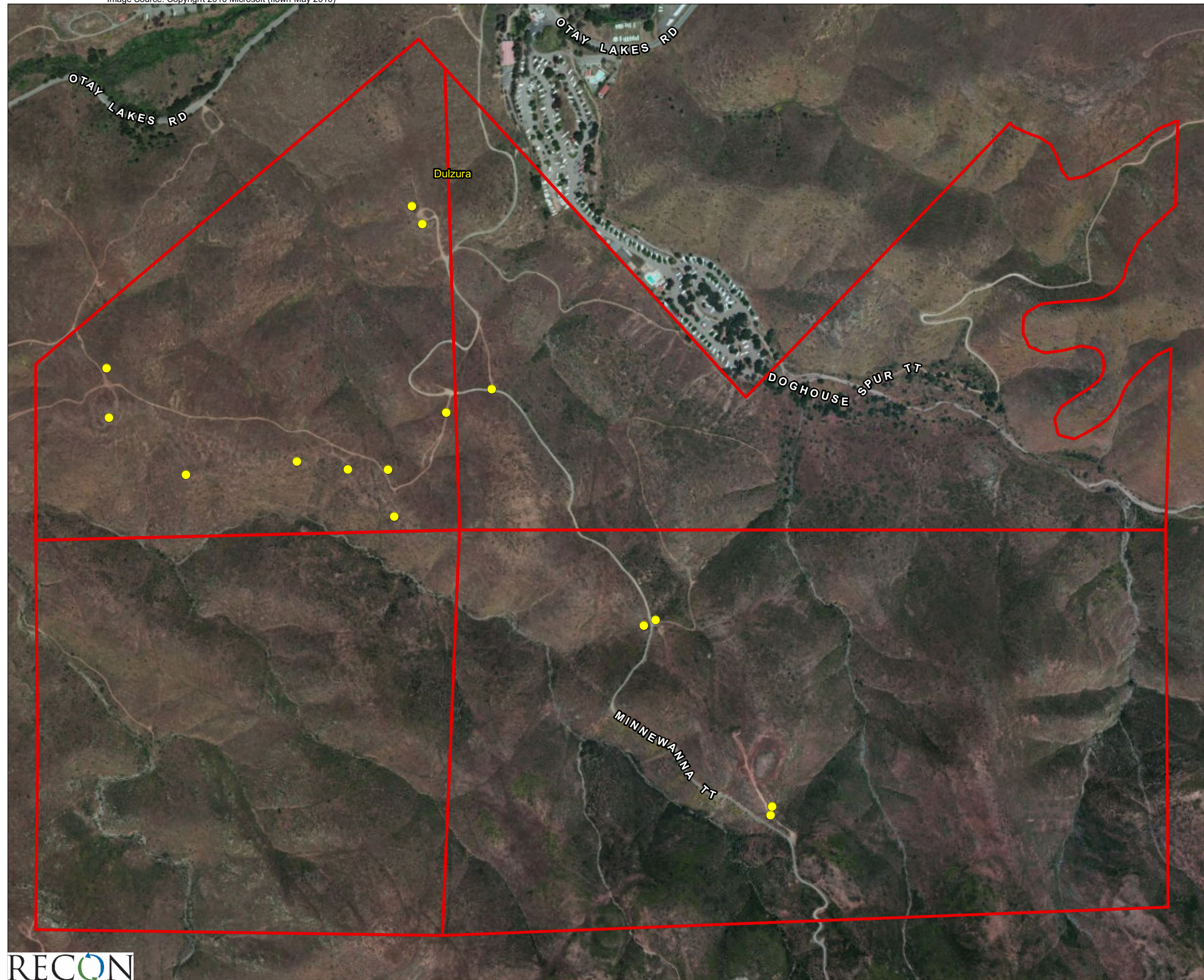


FIGURE 5
Photographic Monitoring Locations
at the Jamul Mountains Parcels,
Otay Ranch Preserve





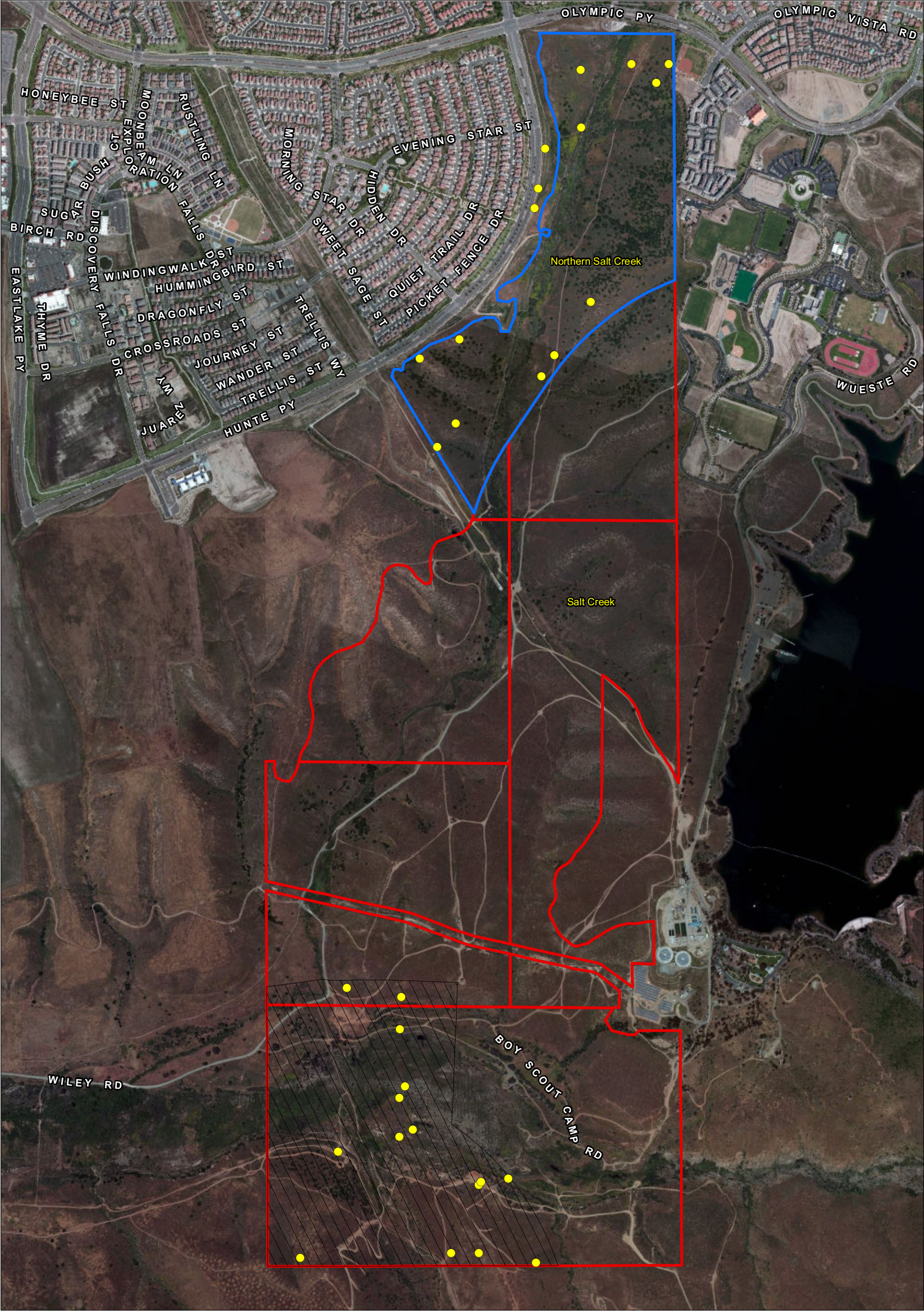
-  Conveyed Land Under POM Management as of March 2012
-  Photographic Monitoring Locations



FIGURE 6

Photographic Monitoring Locations at the Dulzura Parcels, Otay Ranch Preserve



- Conveyed Land Under POM Management as of March 2012
- Anticipated Land to be Conveyed in FY 2012-13
- Salt Creek (FUDS)
- Photographic Monitoring Locations

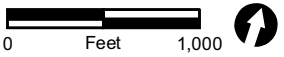





FIGURE 7
Photographic Monitoring Locations at the
Salt Creek FUDS and Northern Salt Creek
Parcel, Otay Ranch Preserve



 Conveyed Land Under POM Management as of March 2012

 Proposed Area for Focused Sensitive Plant Surveys

 Suitable Coastal California Gnatcatcher Habitat


Sensitive Plants and Wildlife

Sensitive Plant

 South Coast Saltbush

Bird

 Coastal California Gnatcatcher

 Coastal Cactus Wren

 Coastal Cactus Wren Nest

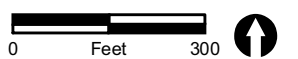
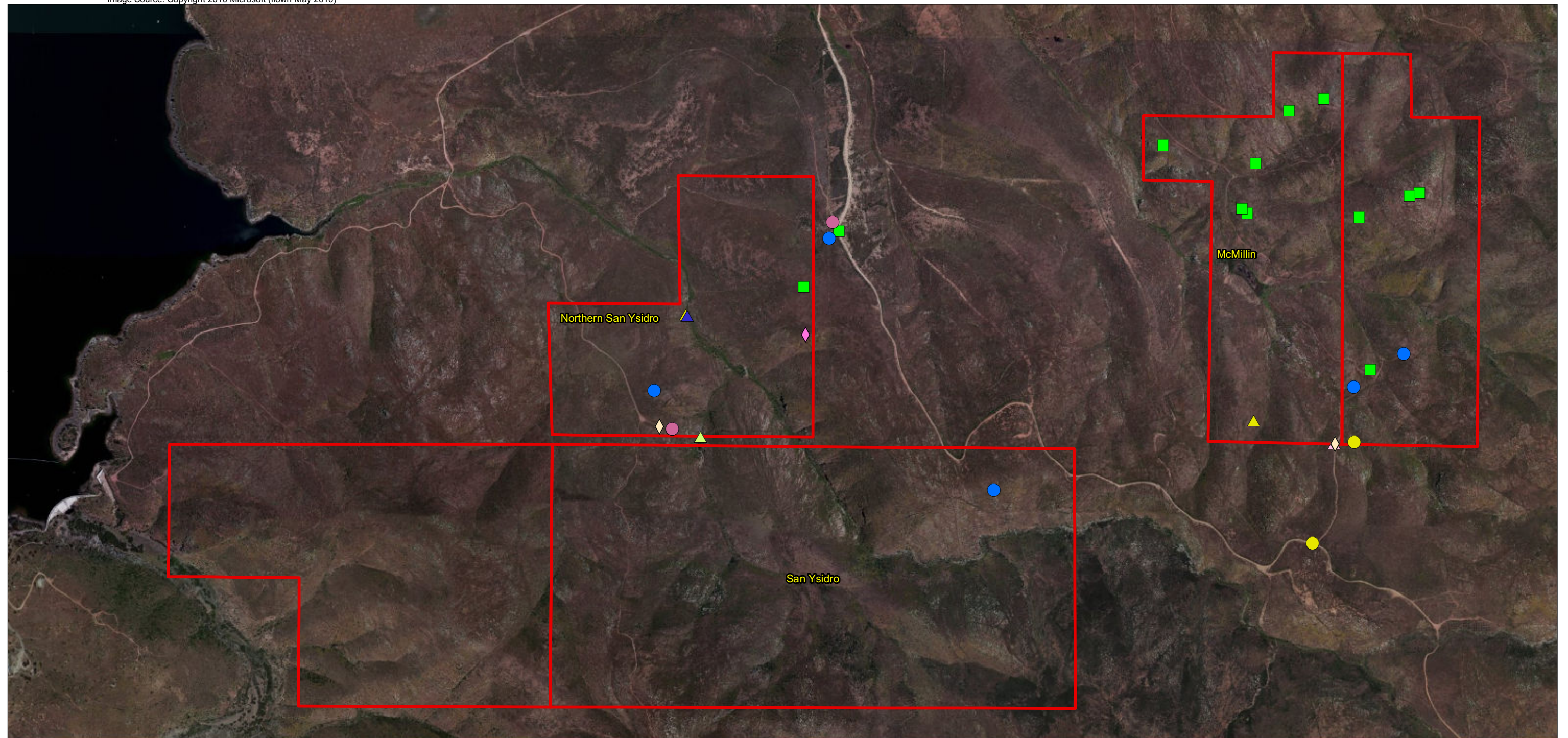


FIGURE 8

Sensitive Plant and Wildlife Locations at the Wolf Canyon Parcel, Otay Ranch Preserve



Conveyed Land Under POM Management as of March 2012

Sensitive Plants and Wildlife

Insect

■ Quino Checkerspot Butterfly

Plant

▲ Chocolate Lily
▲ Jennifer's Monardella

Mammal

● San Diego Black-tailed Jackrabbit

Bird

● Coastal California Gnatcatcher

▲ Tecate Cypress

▲ Western Spleenwort

● Golden Eagle

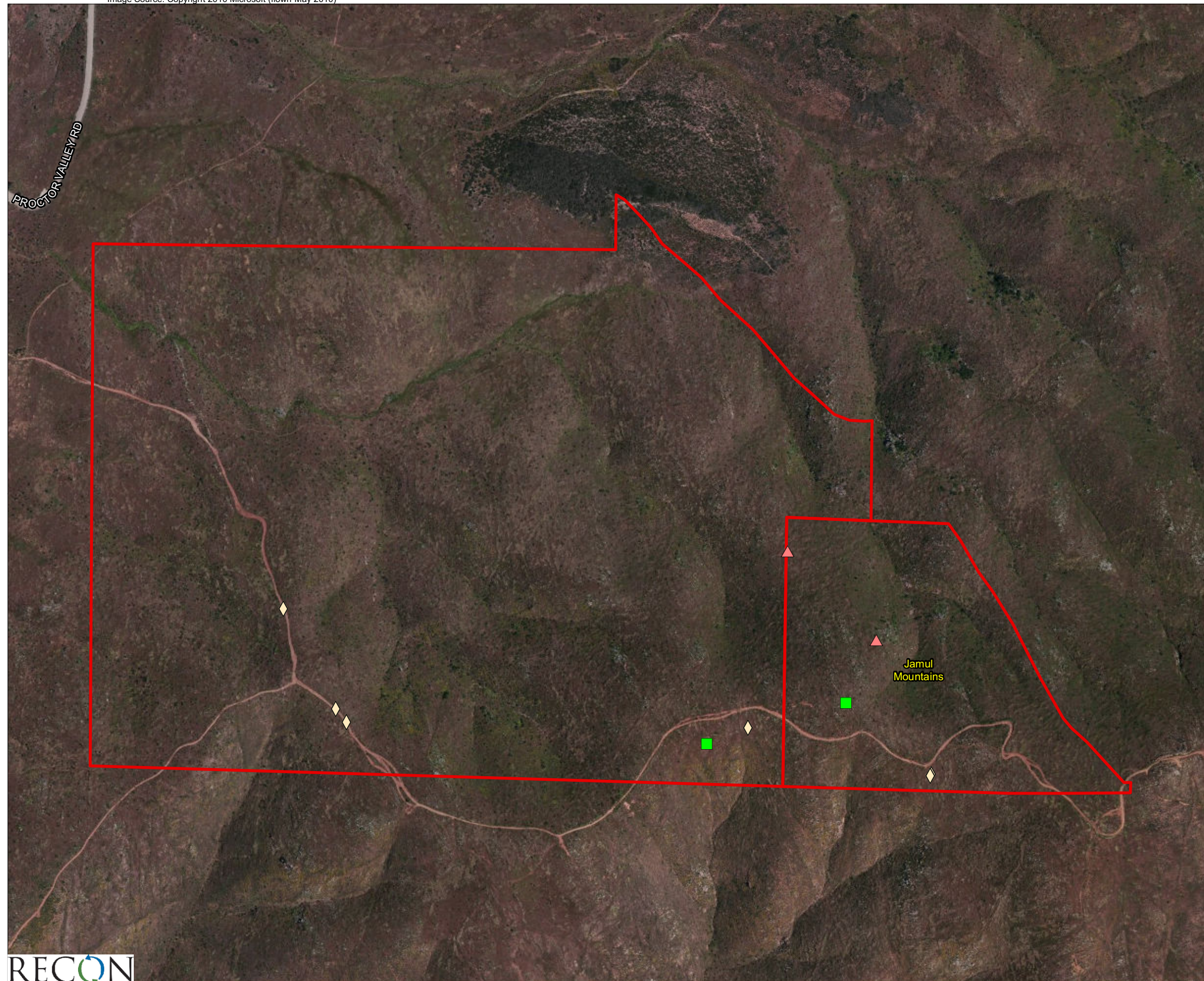
Reptile

◆ Red Diamond Rattlesnake

◆ Coast Horned Lizard

FIGURE 9

Sensitive Plant and Wildlife Locations
at the Northern San Ysidro, San Ysidro,
and McMillin Parcels, Otay Ranch Preserve



Conveyed Land Under POM Management as of March 2012

Sensitive Plants and Wildlife

Insect

Quino Checkerspot Butterfly

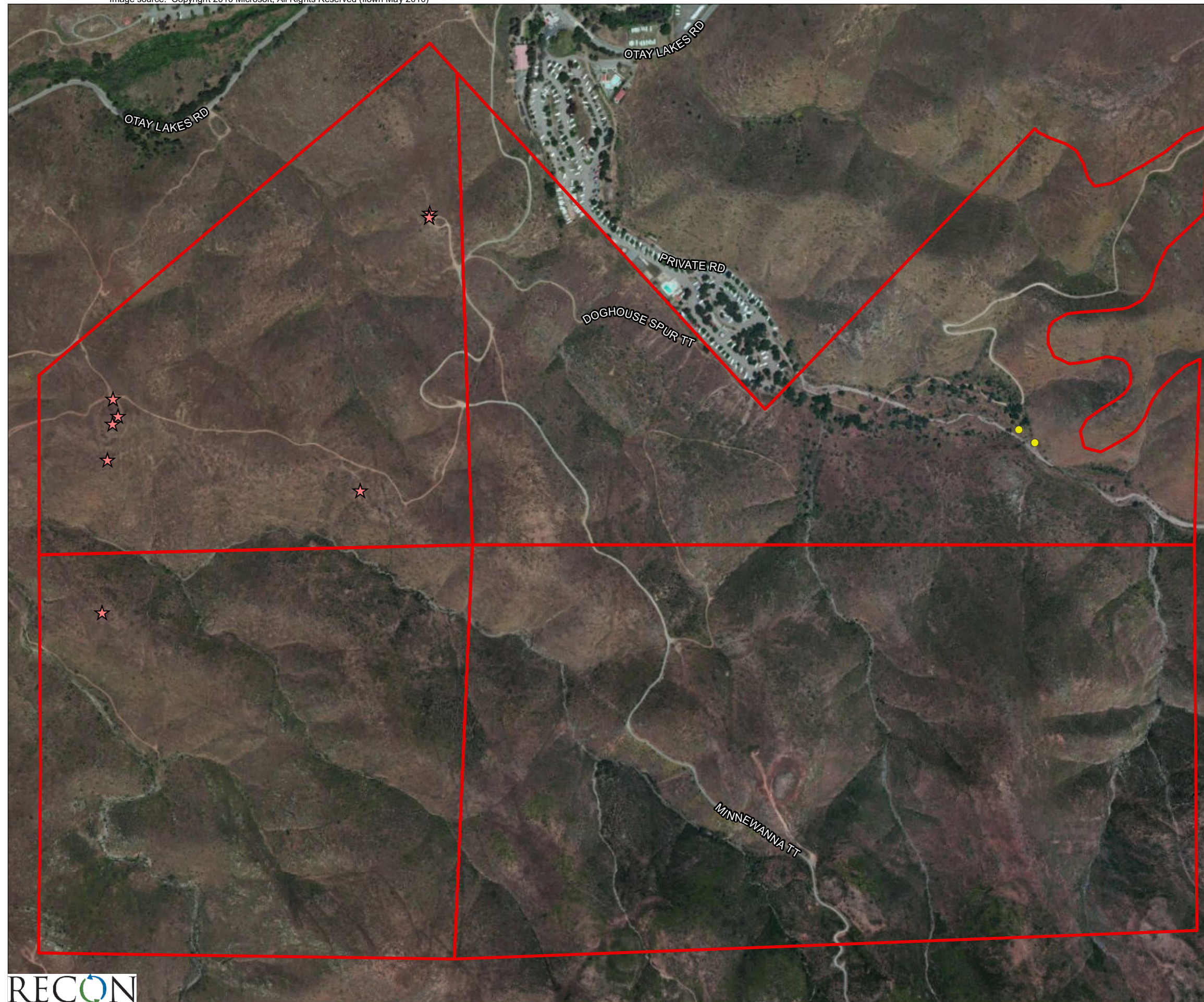
Plant

Brewer's Redmaids

Reptile

Coast Horned Lizard

FIGURE 10
Sensitive Plant and Wildlife Locations
at the Jamul Mountains Parcels,
Otay Ranch Preserve



- Dulzura Survey Parcels
- Fauna Observed**
- ★ Quino Checkerspot Butterfly
- Flora Observed**
- Palmer's Goldenbush

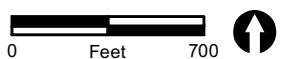
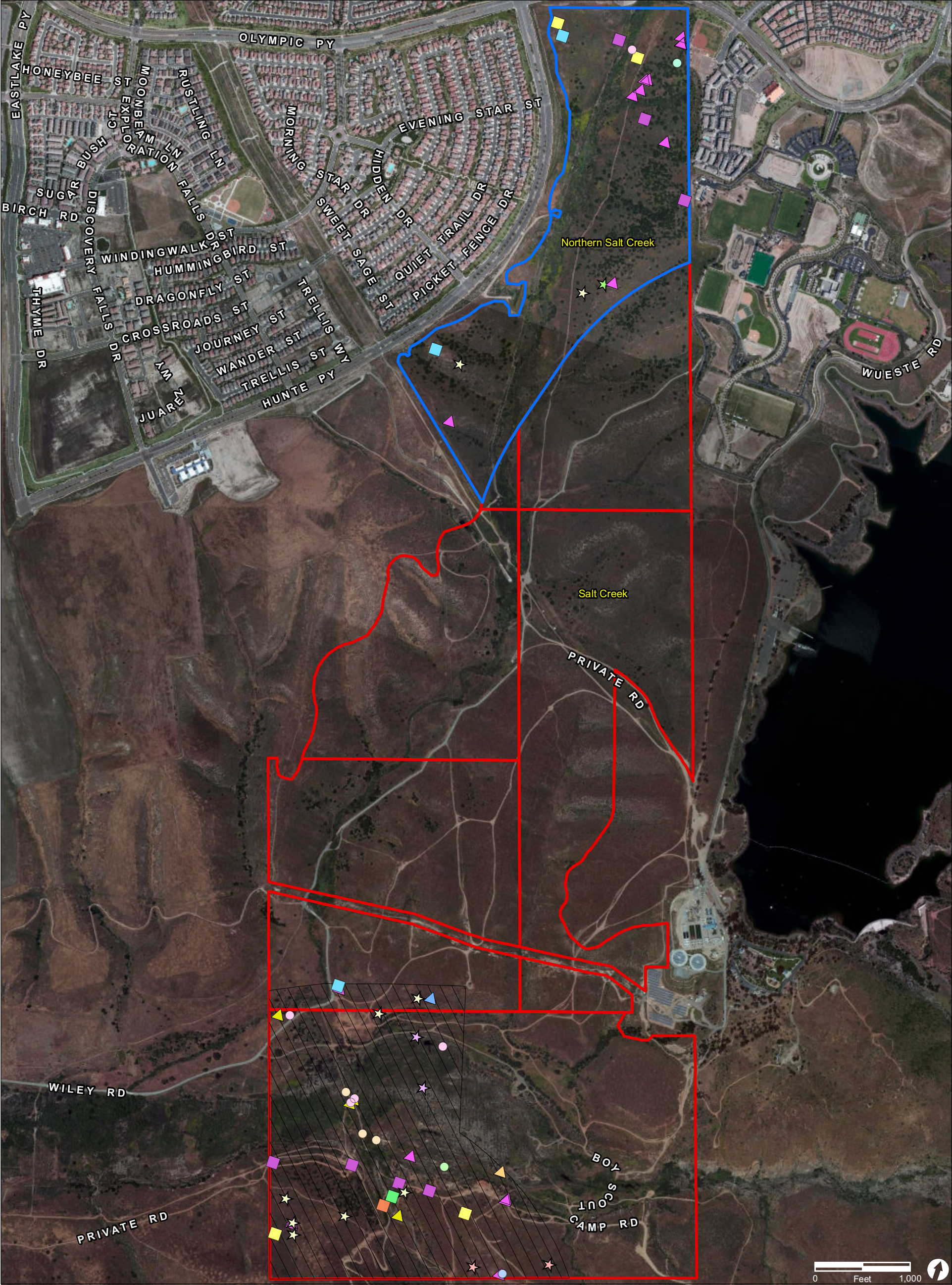


FIGURE 11
Sensitive Plant and Wildlife Locations
at the Dulzura Parcels, Otay Ranch Preserve



- Conveyed Land Under POM Management as of March 2012
- Anticipated Land to be Conveyed in FY 2012-13
- Salt Creek (FUDS)
- Sensitive Plant Observations**
- Ashy Spike-moss

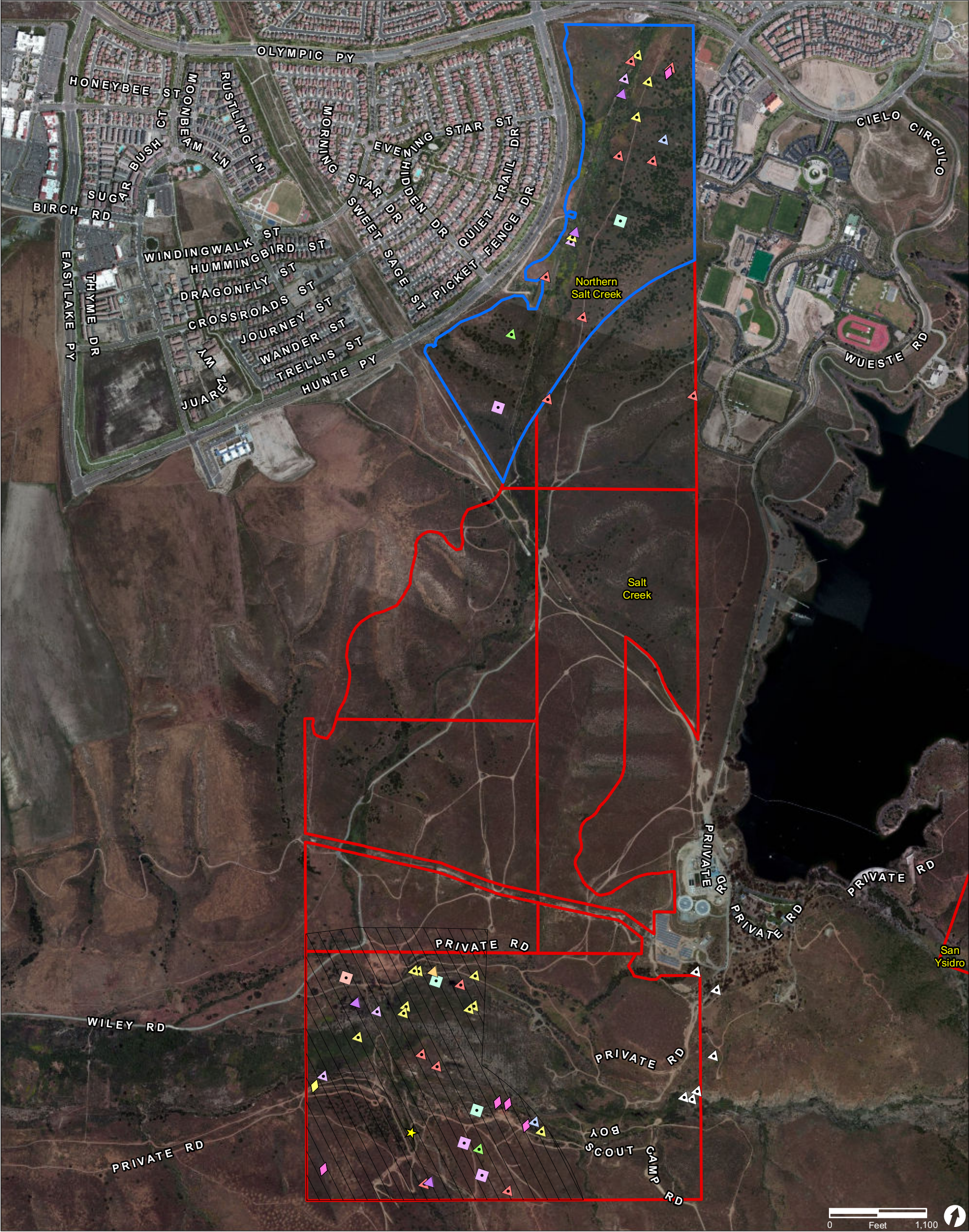
- Blue Streamwort
- Decumbent Goldenbush
- Long-spined Spineflower
- Munz's Sage
- Otay Manzanita
- Otay Mountain Ceanothus

- Otay Tarplant
- Palmer's Grapplinghook
- San Diego Barrel Cactus
- San Diego County Viguiera
- San Diego Marsh-elder
- Singlewhorl Burrobrush

- Snake Cholla
- Spiny Rush
- Spreading Navarretia
- Tecate Cypress
- Variegated Dudleya

FIGURE 12a

Sensitive Plant Locations at the FUDS, Salt Creek, and Northern Salt Creek Parcels, Otay Ranch Preserve



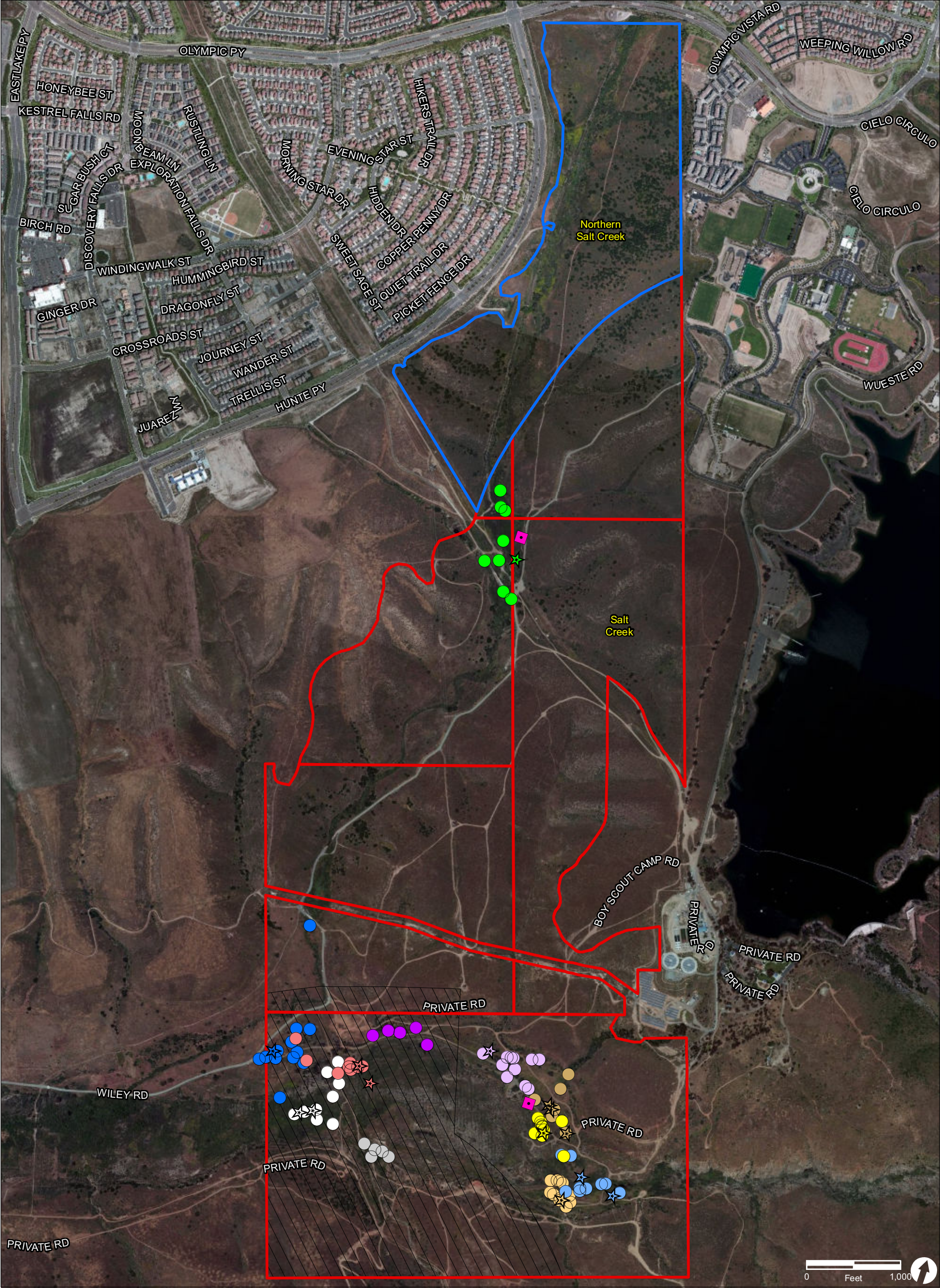
- Conveyed Land Under POM Management as of March 2012
- Anticipated Land to be Conveyed in FY 2012-13
- Salt Creek (FUDS)

- Sensitive Wildlife Observations**
- Insect
- ★ Thorne's Hairstreak
- Mammals
- Mule Deer
 - San Diego Black-tailed Jackrabbit
 - Woodrat

- Birds**
- ▲ Coastal California Gnatcatcher
 - ▲ Cooper's Hawk
 - ▲ Least Bell's Vireo
 - ▲ Southern California Rufous-crowned Sparrow
 - ▲ White-tailed Kite
 - ▲ Yellow Warbler
 - ▲ Yellow-breasted Chat
 - ▲ Yellow-Billed Cuckoo Observations*

- Reptiles**
- ◆ Belding's Orange-throated Whiptail
 - ◆ Red Diamond Rattlesnake
- * Data collected by Clark Biological

FIGURE 12b
Sensitive Wildlife Locations at the
FUDS, Salt Creek, and Northern Salt Creek
Parcels, Otay Ranch Preserve



Conveyed Land Under POM Management as of March 2012

Anticipated Land to be Conveyed in FY 2012-13

Salt Creek (FUDS)

Brown-headed Cowbird Traps

★

A, Nest

●

A, Observation

★

B, Nest

★

C, Nest

●

C, Observation

★

F, Nest

●

B, Observation

★

H, Nest

●

H, Observation

●

F, Observation

★

I, Nest

●

I, Observation

●

L, Nest

●

L, Observation

★

M, Nest

★

O, Nest

●

O, Observation

●

R, Observation

●

S, Observation

* Data collected by Clark Biological

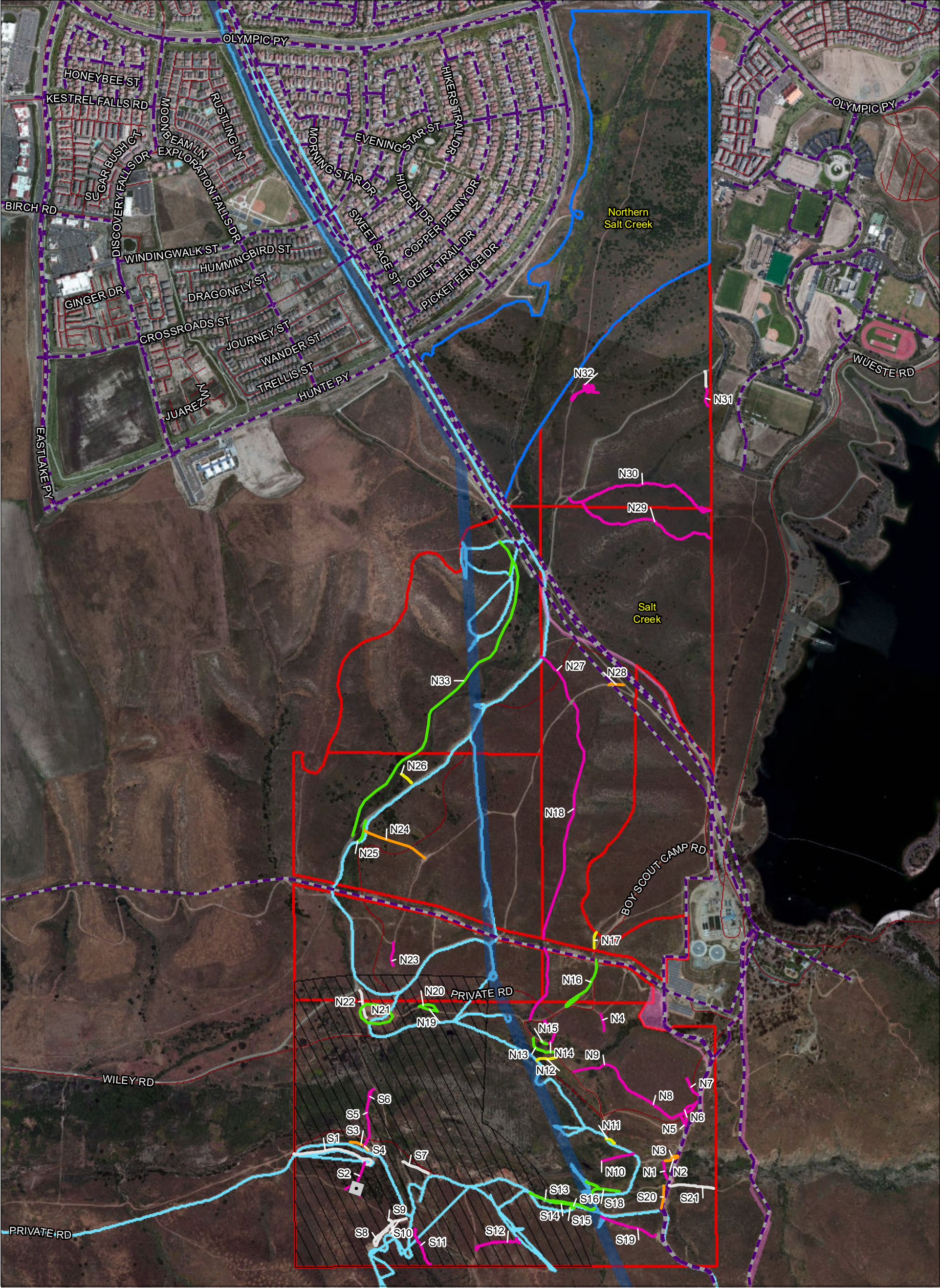
0

Feet

1,000

FIGURE 13

Least Bell's Vireo Locations and Brown-headed Cowbird Trapping Locations at the FUDS and Salt Creek Parcels, Otay Ranch Preserve



Conveyed Land Under POM Management as of March 2012

Anticipated Land to be Conveyed in FY 2012-13

Salt Creek (FUDS)

Abandoned Vagrant Camp Converted to USCBP Shade Structure: Removed in Oct. 2012

High

Medium

Low

Road Closure Not Proposed

Need Additional Information

SD County Water Authority Pipeline

Sempra Access Road

Sempra Transmission Corridor

Otay Water District Easements

0

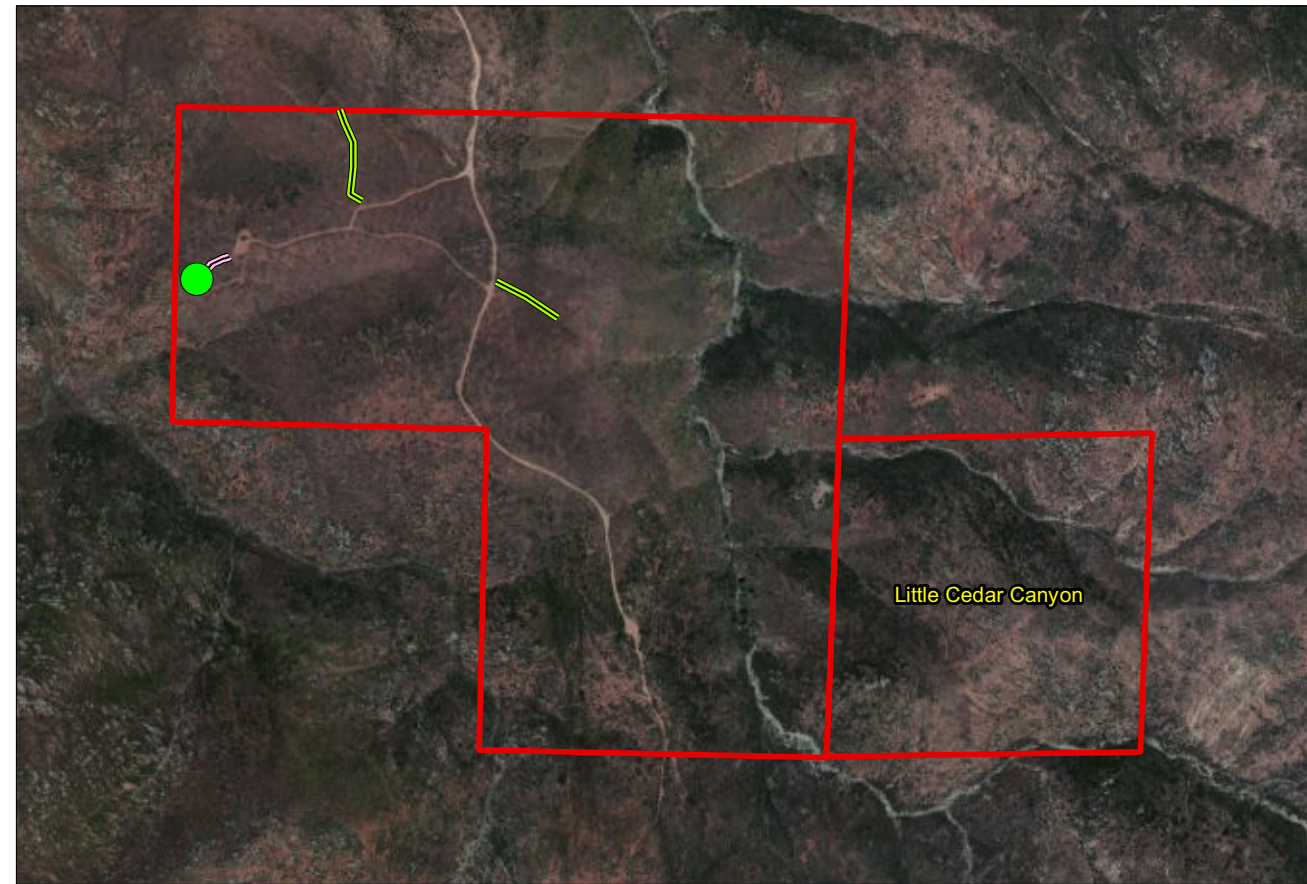
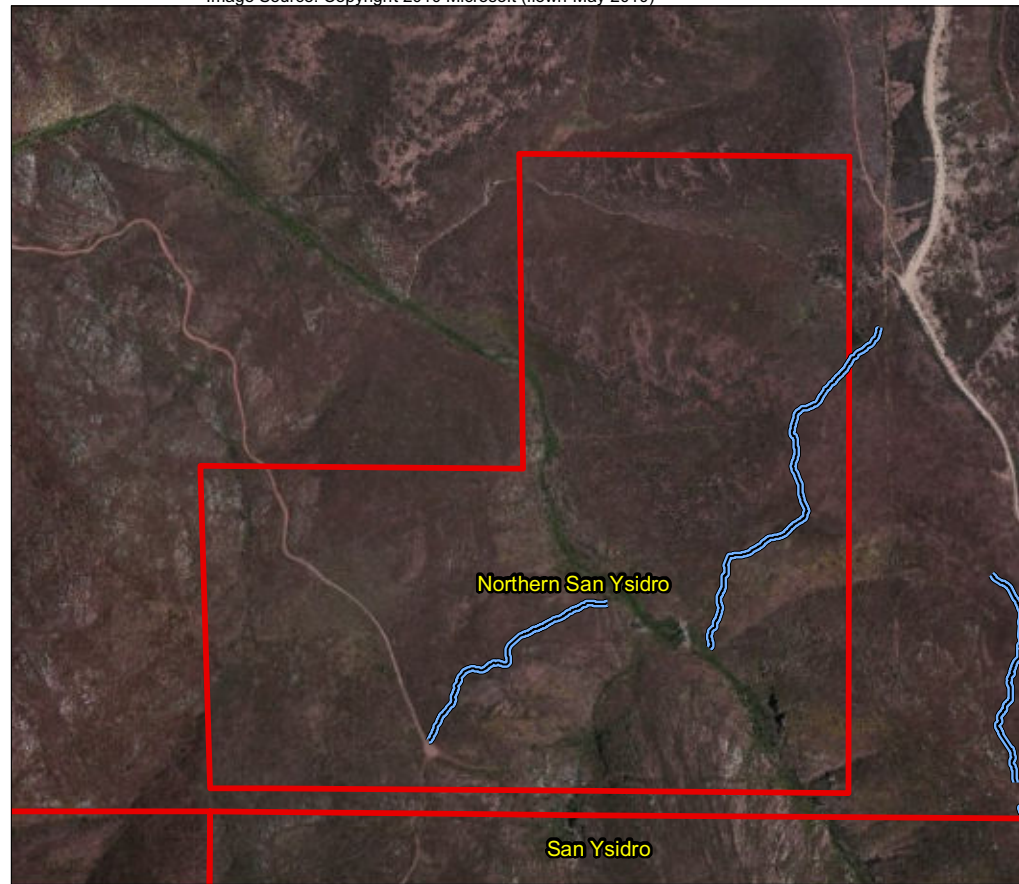
Feet

1,000

FIGURE 14
Access Issues and Proposed Road Closures
at the Salt Creek Parcels, Otay Ranch Preserve

RECON

M:\JOBS\315256\common_gis\fig14_ann_12.mxd 1/15/2013



- Conveyed Land Under POM Management as of March 2012
- Unauthorized Shooting Range
- Installed Fence
- Quad Trail
- Unauthorized Road
- Habitat Damage by Vehicles

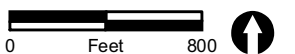
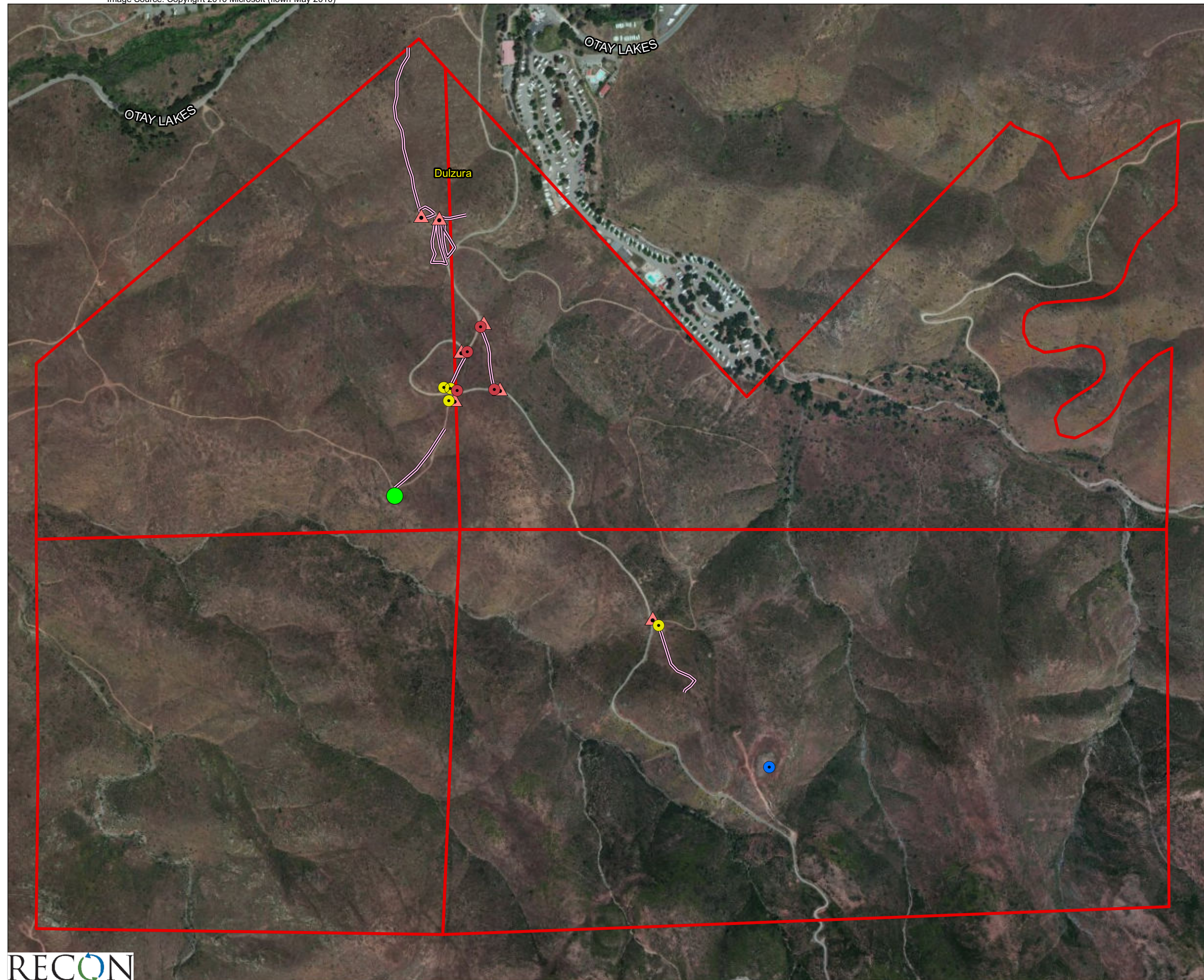


FIGURE 15

Access Issues at the Northern San Ysidro, San Ysidro, and Little Cedar Canyon Parcels, Otay Ranch Preserve



Conveyed Land Under POM Management as of March 2012

Installed Sign

Installed by USCBP

Boulders

Brushpile

Access Issues

Unauthorized Shooting Range

Burnt Hillside

Habitat Damage by Vehicles

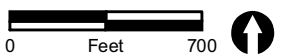


FIGURE 16

Access Issues at the Dulzura Parcels,
Otay Ranch Preserve



- Conveyed Land Under POM Management as of March 2012
- Anticipated Land to be Conveyed in FY 2012-13
- Salt Creek (FUDS)

- Installed Sign
- Illegal Shooting Observation
- Installed Fence Location
- Proposed Fence Location

- Fence Repaired
- Quad Trail
- Installed Fence

FIGURE 17

Access Issues at the FUDS, Salt Creek, and Northern Salt Creek Parcels, Otay Ranch Preserve



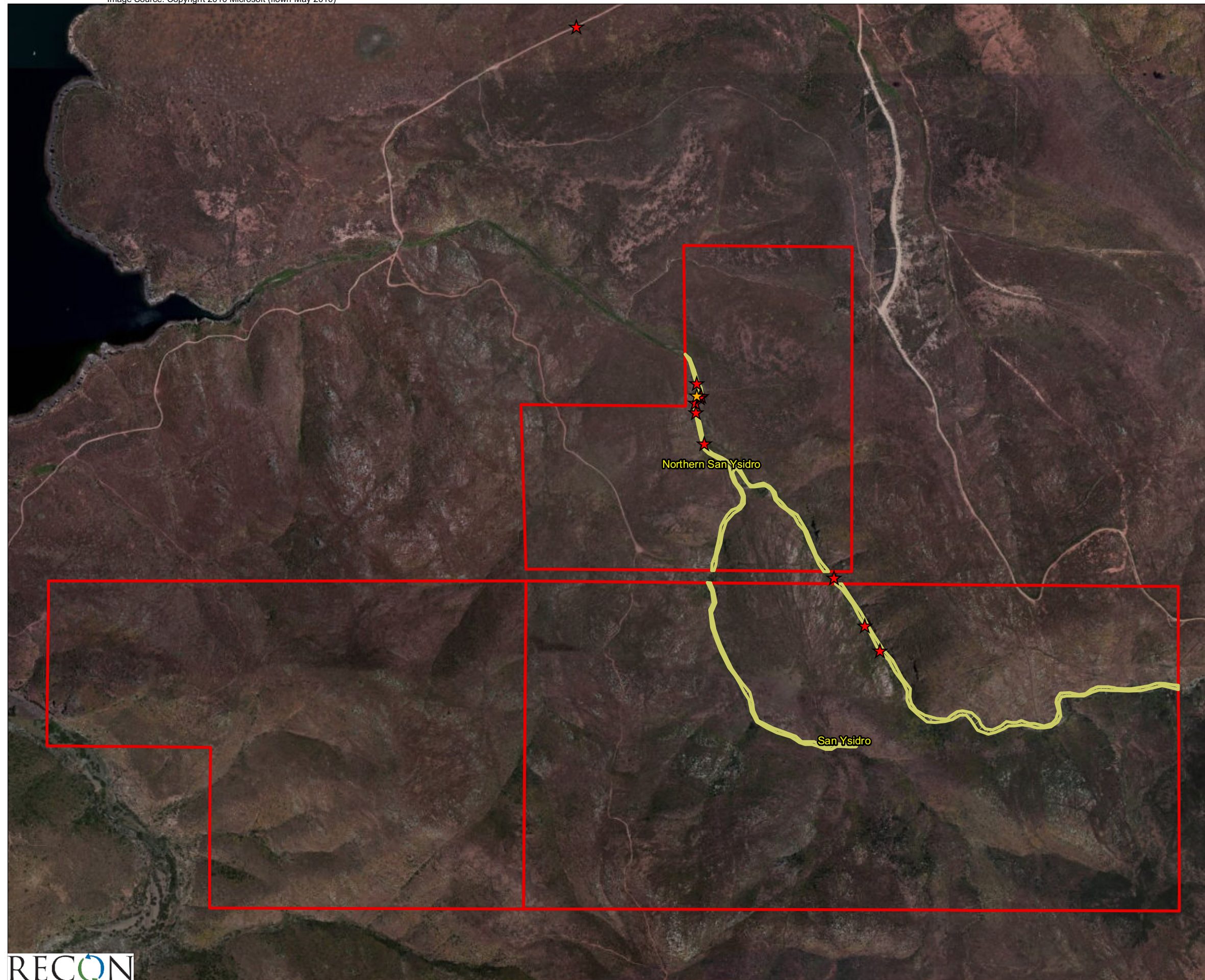
- Conveyed Land Under POM Management as of March 2012
- Anticipated Land to be Conveyed in FY 2012-13
- Salt Creek (FUDS)
- Stinkwort Treatment

- Invasive Plant Species Observations**
- Cal-IPC High
- Fennel
 - Giant Reed
 - Pampas Grass
 - Red Brome
 - Perennial Pepperweed
 - Saltcedar

- Cal-IPC Moderate/Alert
- Stinkwort
 - Washington Fan Palm

- Additional Cal-IPC Moderate/Limited
- Bermuda Grass
 - Milk Thistle
 - Italian and Milk Thistle
 - Peruvian Pepper Tree
 - Smilo Grass

FIGURE 18
Invasive Plant Species at the FUDS, Salt Creek,
and Northern Salt Creek Parcels, Otay Ranch Preserve



Conveyed Land Under
POM Management as of March 2012

Stinkwort Treatment Area

Invasive Plant Species Observations

Cal-IPC High

★ Fennel

Cal-IPC Moderate/Alert

★ Stinkwort

0 Feet 800



FIGURE 19

Invasive Plant Species at the Northern
San Ysidro and San Ysidro Parcels,
Otay Ranch Preserve

ATTACHMENT 4

Vegetation Communities

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TABLE 1
VEGETATION COMMUNITIES WITHIN THE SALT CREEK FUDS: HOLLAND AND SANDAG
CROSSWALK

Holland (Code)	SANDAG	Acres	MSCP Tier
Maritime Succulent Scrub (32400)	<i>Simmondsia chinensis</i> – <i>Bahiopsis laciniata</i> Association	12.4	I
Southern Interior Cypress Forest (83230)	<i>Hesperocyparis forbesii</i> Provisional Association	1.7	
Native Grassland (42100)	<i>Stipa pulchra</i> Association	28.2	
Saltgrass Grassland (42130)	<i>Distichlis spicata</i> –Annual Grasses Association	0.3	
Wildflower Field (42300)	<i>Deinandra fasciculata</i> Association	4.2	
Diegan Coastal Sage Scrub (32500)	<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> – <i>Malosma laurina</i> Association	24.3	II
	<i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association	17.0	
	<i>Malosma laurina</i> Alliance	6.8	
	<i>Rhamnus crocea</i> Provisional Association	2.6	
	<i>Baccharis sarothroides</i> Association	8.8	
	<i>Salvia apiana</i> – <i>Artemisia californica</i> Association	1.2	
	<i>Rhus integrifolia</i> Association	7.3	
	Total Diegan Coastal Sage Scrub	68.0	
Non-native Grassland (42200)	<i>Avena (barbata, fatua)</i> Semi-natural Stands	0.9	III
	Mediterranean California Naturalized Annual and Perennial Grassland Semi-natural Stands	5.5	
	Total Non-native Grassland (42200)	6.4	
Eucalyptus Woodland (79100)	<i>Eucalyptus (globulus, camaldulensis)</i> Semi-natural Stands	4.3	IV
Disturbed Habitat (11300)	N/A	10.1	
Mule Fat Scrub (63310)	<i>Baccharis salicifolia</i> Association	0.23	*
Non-native Riparian (65000)	<i>Tamarix</i> spp. Semi-natural Stands	24.03	
Southern Riparian Scrub (63300)	<i>Salix laevigata</i> Association	0.85	
	<i>Iva hayesiana</i> Special Stands	2.32	
	<i>Juncus acutus</i> Provisional Association	3.66	
	Total Southern Riparian Scrub (63300)	6.83	
Coastal and Valley Freshwater Marsh (52410)	<i>Typha domingensis</i> Association	0.16	
	<i>Schoenoplectus californicus</i> Association	0.32	
	<i>Eleocharis macrostachya</i> – <i>Marsilea vestita</i> Association	0.76	
	Total Coastal and Valley Freshwater Marsh (52410)	1.24	
TOTAL		168.00**	

*Wetland/riparian vegetation communities do not have an assigned Tier, but are considered sensitive by federal, state, and local jurisdictions.

**Total has been rounded.

TABLE 2
VEGETATION COMMUNITIES WITHIN NORTHERN SALT CREEK:
HOLLAND AND SANDAG CROSSWALK

Holland (Code)	SANDAG	Acres	MSCP Tier
Maritime Succulent Scrub (32400)	<i>Cylindropuntia prolifera</i> Provisional Association	0.7	I
Native Grassland (42100)	<i>Stipa pulchra</i> Association	2.5	
Wildflower Field (42300)	<i>Deinandra fasciculata</i> Association	0.9	
Diegan Coastal Sage Scrub (32500)	<i>Artemisia californica</i> Association	31.5	II
	<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> – <i>Malosma laurina</i> Association	12.7	
	<i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association	25.3	
	<i>Baccharis sarothroides</i> Association	4.7	
	<i>Eriogonum fasciculatum</i> Association	7.7	
	<i>Rhus integrifolia</i> Association	25.5	
	<i>Salvia apiana</i> – <i>Artemisia californica</i> Association	8.1	
	Total Diegan Coastal Sage Scrub (32500)	115.5	
Non-native Grassland (42200)	<i>Avena (barbata, fatua)</i> Semi-natural Stands	1.9	III
	Mediterranean California Naturalized Annual and Perennial Grassland Semi-natural Stands	5.8	
	<i>Brassica nigra</i> Semi-natural Stand Type	2.2	
	Total Non-native Grassland (42200)	9.9	
Disturbed Habitat (11300)	Unvegetated	1.4	IV
Coastal and Valley Freshwater Marsh (52410)	<i>Typha domingensis</i>	0.41	*
Non-native Riparian (65000)	<i>Tamarix</i> spp. Semi-natural Stands	11.61	
Disturbed wetland (11200)	<i>Lepidium latifolium</i> Semi-natural Stands	0.06	
Southern Riparian Scrub (63300)	<i>Salix lasiolepis</i> Association	4.77	
	<i>Iva hayesiana</i> Special Stands	1.83	
	Total Southern Riparian Scrub (63300)	6.60	
TOTAL		150.00**	

*Wetland/Riparian vegetation communities do not have an assigned Tier, but are considered sensitive by federal, state, and local jurisdictions.

**Total has been rounded.

ATTACHMENT 5

Photographs 1–3

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PHOTOGRAPH 1
Damaged Preserve Sign at Salt Creek



PHOTOGRAPH 2
RECON Crew Installing Fence Posts to Prevent Vehicle Damage to
Quino Checkerspot Butterfly Habitat on San Ysidro Parcel



PHOTOGRAPH 3
Newly Installed Fence Posts Blocking Access to
Quino Checkerspot Butterfly Habitat