



2009-2010 Annual Report for Otay Ranch Preserve - Salt Creek and San Ysidro Parcels

Prepared for

City of Chula Vista
276 Fourth Avenue, MSP-101
Chula Vista, CA 91910
Contact: Glen Laube

Prepared by

RECON Environmental, Inc.
1927 Fifth Avenue
San Diego, CA 92101-2358
P 619.308.9333 F 619.308.9334
RECON Number 5256
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A handwritten signature in black ink, appearing to read 'Anna Bennett'.

Anna Bennett, Biologist

A handwritten signature in black ink, appearing to read 'Mark W. Dodero'.

Mark Dodero, Senior Biologist

TABLE OF CONTENTS

1.0	Introduction	1
1.1	Project Description	1
1.2	Purpose	1
2.0	Resource Management Plans	1
2.1	Phase 1 Resource Management Plan	5
2.2	Phase 2 Resource Management Plan	5
3.0	Responsibilities	6
3.1	Preserve Owner/Manager	6
3.2	Preserve Steward/Biologist	6
3.2.1	Ongoing Services	6
3.2.2	Biological Surveys and Ongoing Biological Monitoring	8
3.2.3	Adaptive Management	8
3.2.4	Reporting	9
3.2.5	Other services that may be required	9
4.0	Salt Creek	9
4.1	Survey Methods	10
4.1.1	Regularly Scheduled Site Visits	10
4.1.2	Photographic Monitoring	11
4.1.3	Flora	11
4.1.4	Fauna	13
4.2	Results and Discussion	24
4.2.1	Regularly Scheduled Site Visits	24
4.2.2	Photographic Monitoring	28
4.2.3	Newly Documented Flora and Fauna	28
4.2.4	Fauna	39
5.0	San Ysidro	42
5.1	Methods	42
5.1.1	Reconnaissance Site Visits	42
5.1.2	Photographic Monitoring Points	42
5.1.3	Flora	42
5.1.4	Fauna	44

TABLE OF CONTENTS (cont.)

5.2 Results/Discussion	50
5.2.1 Reconnaissance Site Visits	50
5.2.2 Photographic Monitoring Points	50
5.2.3 Flora	58
5.2.4 Fauna	64
6.0 Meetings and Coordination	66
7.0 Budget	66
8.0 Anticipated Tasks (FY 2010-11)	66
8.1 Access Issues	66
8.2 Preserve Visits	66
8.3 Monitoring	67
8.4 Meetings and Coordination	67
8.5 Reports	67
9.0 References Cited	68

FIGURES

1. Regional Location of Conveyed Otay Ranch Preserve Land	2
2. Salt Creek and San Ysidro Preserve Locations	3
3. FY 2009-2010 Photographic Monitoring Points, Salt Creek	12
4. FY 2009-2010 CAGN Survey Area – Salt Creek	19
5. FY 2009-2010 Coastal Cactus Wren Photographic Monitoring Locations, Salt Creek	20
6. FY 2009-2010 Avian Point Count Locations, Salt Creek	22
7. FY 2009-2010 Quino Checkerspot Habitat Assessment, Salt Creek	23
8. FY 2009-2010 Access Issues and Illegal Dumping, Salt Creek	27
9. FY 2009-2010 Additional Sensitive Flora, Salt Creek	30
10. FY 2009-2010 Additional Incidental Sightings of Sensitive Fauna, Salt Creek	31
11. FY 2009-2010 Additional Incidental Sightings of Invasive Plant Species, Salt Creek	32
12. FY 2009-2010 Coastal Cactus Wren Locations, Salt Creek	41
13. FY 2009-2010 Photographic Monitoring Points, San Ysidro	43
14. FY 2009-2010 CAGN Survey Area, San Ysidro	46
15. FY 2009-2010 Avian Point Count Locations, San Ysidro	48
16. FY 2009-2010 Quino Checkerspot Habitat Assessment, San Ysidro	49

TABLE OF CONTENTS (cont.)

FIGURES (cont.)

17.	FY 2009-2010 Additional Sensitive Flora, San Ysidro	51
18.	FY 2009-2010 Additional Incidental Sightings of Sensitive Fauna, San Ysidro	52
19.	FY 2009-2010 Additional Incidental Sightings of Invasive Plant Species, San Ysidro	53

PHOTOGRAPHS

1.	Salt Creek Preserve	4
2.	San Ysidro Preserve	4
3.	Stinkwort Infestation, Salt Creek	14
4.	Closeup of Stinkwort, Salt Creek	14
5.	RECON Crew Applying Herbicide to Stinkwort	15
6.	Stinkwort Treated with a Glyphosate Based Herbicide	16
7.	Southern Boundary Fence	25
8.	Off-Highway Vehicles, Salt Creek	26
9.	Grazing Horse, Salt Creek	26
10.	Previously Installed Preserve Signs at Salt Creek	29
11.	Coyote Observed at Salt Creek	34
12.	Pacific Tree Frog Observed at Salt Creek	34
13.	Greater Roadrunner Observed at Salt Creek	35
14.	Killdeer Observed at Salt Creek	35
15.	Variegated Dudleya, Salt Creek	36
16.	Snake Cholla, Salt Creek	37
17.	Nuttall's Scrub Oak, Salt Creek	38
18.	Stand of Nuttall's Scrub Oak, Salt Creek	38
19.	Two-striped Gartersnake, San Ysidro	54
20.	Mule Deer, San Ysidro	54
21.	Coastal Rosy Boa, San Ysidro	55
22.	Lark Sparrow with Nest Building Material, San Ysidro	55
23.	Red Diamond Rattlesnake, San Ysidro	56
24.	Speckled Rattlesnake, San Ysidro	57
25.	Southern Pacific Rattlesnake, San Ysidro	57
26.	Dunn's Mariposa Lily, San Ysidro	59
27.	Gander's Pitcher Sage, San Ysidro	60
28.	Variegated Dudleya, San Ysidro	60
29.	Otay Mountain Lotus, San Ysidro	61
30.	Otay Lilac, San Ysidro	62
31.	Chaparral Rein Orchid, San Ysidro	63
32.	Small-flowered Morning Glory, San Ysidro	65

TABLE OF CONTENTS (CONT.)

ATTACHMENT 1: Tables 1-10, Salt Creek

1. Reconnaissance Site Visits & Focused Surveys at Otay Ranch Preserve – Salt Creek
2. Coastal California Gnatcatcher Protocol Survey Effort and Conditions – Salt Creek
3. Coastal Cactus Wren Nest Survey Effort and Conditions at Otay Ranch Preserve – Salt Creek
4. Avian Point Count Survey Effort and Conditions at Otay Ranch – Salt Creek
5. Previously Undocumented Plant Species Observed at Otay Ranch Preserve – Salt Creek
6. Wildlife Species Observe/Detected at Otay Ranch Preserve – Salt Creek
7. Sensitive Plant Species Previously Undocumented or Additional Populations at Otay Ranch Preserve – Salt Creek
8. Wildlife Species Observed/Detected During the Coastal California Gnatcatcher Protocol Surveys at the Otay Ranch Preserve – Salt Creek
9. Bird Species Observed/Detected on the Avian Point Count Surveys at Otay Ranch Preserve – Salt Creek
10. Sensitive Wildlife Occurring at Otay Ranch Preserve – Salt Creek

ATTACHMENT 2: Table 11-19, San Ysidro

11. Reconnaissance Site Visits & Focused Surveys at Otay Ranch Preserve – San Ysidro
12. Coastal California Gnatcatcher Protocol Survey Effort and Conditions – San Ysidro
13. Avian Point Count Survey Effort and Conditions at Otay Ranch Preserve – San Ysidro
14. Previously Undocumented Plant Species Observed at Otay Ranch – San Ysidro
15. Wildlife Species Observed/Detected at Otay Ranch Preserve – San Ysidro
16. Sensitive Plant Species Observed at Otay Ranch Preserve – San Ysidro
17. Wildlife Species Observed/Detected During the Coastal California Gnatcatcher Protocol Surveys at Otay Ranch Preserve – San Ysidro
18. Bird Species Observed/Detected on the Avian Point Count Surveys at Otay Ranch Preserve – San Ysidro
19. Sensitive Wildlife Species Occurring at Otay Ranch Preserve – San Ysidro

ATTACHMENT 3: Table 20, Otay Ranch Preserve – Salt Creek and San Ysidro

20. 2009-2010 Cost Breakdown by Task for Otay Ranch Preserve – Salt Creek and San Ysidro

1.0 Introduction

1.1 Project Description

The Otay Ranch Preserve (Preserve) is located in southwestern San Diego County and is composed of three major parcels: Otay River parcel, Proctor Valley parcel, and San Ysidro Mountains parcel (County of San Diego [County] 1993). The Preserve boundaries include lands within the city of Chula Vista (City) and the County. During the time frame of this report (October 2009 through June 2010), lands that have been conveyed to the Preserve include the Salt Creek and San Ysidro parcels (Figures 1 and 2; Photographs 1 and 2). As lands are conveyed to the Preserve, the total area will increase to more than 11,000 acres. These lands will be set aside as mitigation for impacts to sensitive resources resulting from Otay Ranch development (County 1993). The Preserve is managed by the Preserve Owner/Manager (POM), which is discussed in more detail below.

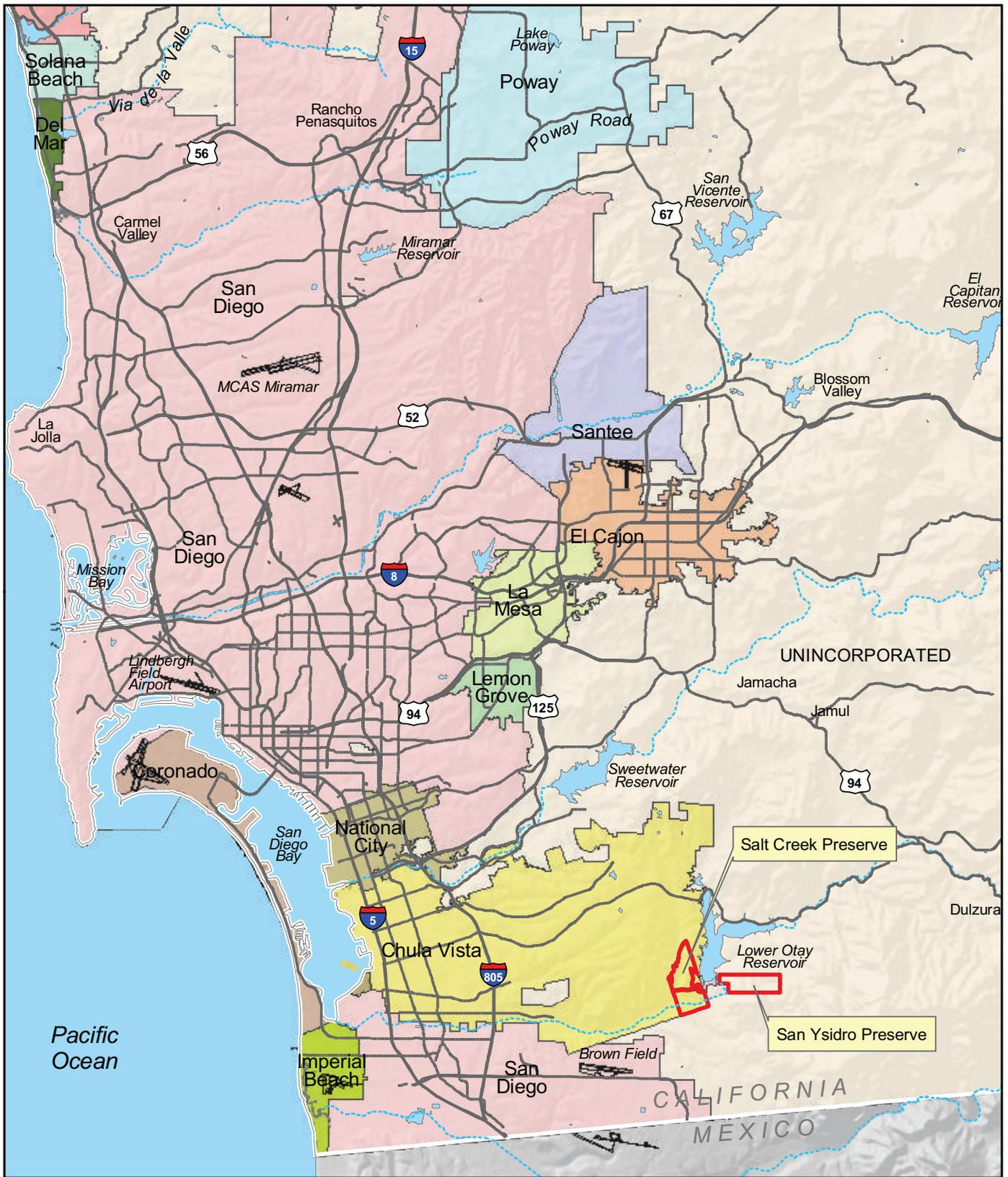
The Preserve is a hard-line preserve that has been designed and is managed specifically for protection and enhancement of multiple species present (County of San Diego 1993). The Preserve also serves to connect large areas of open space through a series of wildlife corridors, including connections between regional open space areas such as Otay Reservoir and San Miguel Mountain (County of San Diego 1993).

1.2 Purpose

This annual report serves as a supplement to the Phase 2 Otay Ranch Resource Management Plan (RMP) and provides a description of management and monitoring activities conducted from October 2009 through the end of June 2010. An approximate cost for each task is included in Attachment 1 of this report.

2.0 Resource Management Plans

The purpose of the RMP is to establish “a permanent preserve within Otay Ranch to protect and enhance biological, paleontological, cultural, and scenic resources; maintain biological diversity; and promote the survival and recovery of native species and habitats” (County of San Diego 2007). The Otay Ranch RMP is composed of the Phase 1 (County of San Diego 1993) and the Phase 2 RMP (County of San Diego 2002), and the contents of these documents are summarized below.



Conveyed Otay Ranch Preserve Land

FIGURE 1
Regional Location of Conveyed
Otay Ranch Preserve Land



 Conveyed Otay Ranch Preserve Land

FIGURE 2



PHOTOGRAPH 1
Salt Creek Preserve



PHOTOGRAPH 2
San Ysidro Preserve

2.1 Phase 1 Resource Management Plan

The primary purpose of the Phase 1 RMP is to serve as the functional equivalent of the County Resource Protection Ordinance (RPO) (County of San Diego 2002). The goal of the RPO is “to increase the preservation and protection of the County’s unique topography, natural beauty, diversity, and natural resources” (RPO Article I). The planning context of the RMP and RPO are summarized in the Phase 1 RMP (County of San Diego 2002). As summarized in the Phase 2 RMP (County of San Diego 2002), the Phase 1 RMP is to serve as a comprehensive plan to manage, enhance, and preserve sensitive, natural, and cultural resources within the Preserve. The Phase 1 RMP was adopted by the County and City concurrently with the enactment of the Otay Ranch General Development Plan (GDP).

The Phase 1 RMP identifies an open space system as a permanent 11,375-acre Preserve dedicated to the protection and enhancement of the multiple resources present on Otay Ranch.

2.2 Phase 2 Resource Management Plan

The Phase 1 RMP is to be implemented through the Phase 2 RMP. Unlike the Phase 1 RMP, the Otay Ranch Phase 2 RMP is a process rather than a single plan or document (County of San Diego 2002). The Phase 2 RMP encompasses a series of tasks that must be performed over time throughout implementation of the Otay Ranch GDP (County of San 2002). Some of the Phase 2 RMP tasks are fully satisfied upon the completion of a single study or the creation of a plan, while other tasks must be completed as a condition of approval of subsequent Otay Ranch Sectional Planning Areas. Other Phase 2 RMP tasks, such as the Biota Monitoring Program, must be performed over time, even if there are no pending discretionary actions (County of San Diego 2002).

A comprehensive monitoring program for the Preserve is to be developed in conjunction with the Phase 2 RMP (County of San Diego 2002). In addition, an annual monitoring program is to be developed and designed to detect changes in quality and quantity of on-site biological resources, such as sensitive wildlife and plant species, and sensitive habitat.

Four of the Phase 2 RMP studies were completed prior to adoption of the original Otay Ranch GDP. These studies include: a vernal pool study, a wildlife corridor study, a raptor study, and resource identification and mapping (County of San Diego 2002). In addition, a cultural resources systematic survey was completed as part of the Phase 2 RMP (County of San Diego 2002). Tasks that require a continuing commitment to implementation include, but are not limited to, ongoing studies for the coastal California

gnatcatcher (CAGN, *Polioptila californica californica*) and coastal cactus wren (CACW, *Campylorhynchus brunneicapillus*) (County of San Diego 2002).

3.0 Responsibilities

3.1 Preserve Owner/Manager

In 1996, the San Diego County Board of Supervisors authorized the formation of a POM (County of San Diego 2010). At this time, the City and County form the POM (County of San Diego 2007). The POM is responsible for a number of tasks including management of resources, restoration of habitat, and enforcement of open space restrictions for the Preserve (County of San Diego 2010).

3.2 Preserve Steward/Biologist

In 2009, RECON Environmental was contracted to serve as the Preserve Steward/Biologist (PSB). The PSB's roll is to perform basic stewardship and conduct required biological surveys and monitoring for the Preserve (Otay Ranch 2009). The roles and responsibilities of the PSB are listed below. Tasks that may be required include but are not limited to the following:

3.2.1 Ongoing Services

- Prepare an Annual Work Plan recommending management and monitoring tasks to be accomplished during the next fiscal year. The work plan shall include, but is not limited to, the following:
 - Recommendation of tasks to be performed in priority order.
 - Citations of how the tasks relate to the RMP (cite specific enabling RMP goals, objectives, policies, or implementation measures).
 - Expected outcome including success criteria.
 - Estimated costs.
 - Recommendation of who will perform the task.
 - Recommendation of timeframe.

- Oversee and coordinate Otay Ranch preserve management, monitoring, and reporting with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) (collectively known as the Wildlife Agencies), the POM, Otay Ranch land owners who may convey lands within the Preserve, regional monitoring entities, interested public groups, and the general public.
- Provide science-based technical recommendations to POM staff and any contractors retained to conduct specific management tasks, monitoring, data collection and analysis, and adaptive management programs.
- Perform biological monitoring as directed by POM staff.
- Participate and represent the POM in regional or subregional meetings relating to preserve management and monitoring to ensure management and monitoring efforts within the Preserve are not being duplicated. Meetings may include:
 - Monthly Multiple Species Conservation Program (MSCP) Monitoring Group meetings
 - San Diego Association of Governments Environmental Mitigation Program Working Group meetings
 - Otay Valley Regional Park Joint Exercises of Power Agreement meetings if the agenda includes items associated with the Otay Ranch Preserve
- Implement basic stewardship including, but not limited to, the following:
 - Monitor existing fencing/gates and identify needs for additional access control; provide minor repairs and coordinate with appropriate contractor to repair or construct more significant fencing/gate needs.
 - Remove minor amounts of trash, litter, and debris; monitor and report to appropriate contractor to remove significant amounts of trash, litter, and other debris.
 - Remove small acreages of weeds and exotics that are found during routine patrols (significant eradication projects are covered under Section 3.2.3, Adaptive Management).
 - Monitor and report enforcement issues, including off-road traffic, trespassing, grazing, shooting, and illegal dumping to enforcement agencies, such as, the County Sheriffs Department, City Police Department, U.S. Border Patrol (USBP), and property owners.
- Participate in public hearings/meetings, resource agencies meetings, and field visits.

- Complete tasks within time and budget requirements.

3.2.2 Biological Surveys and Ongoing Biological Monitoring

- Provide biological research, data collection, and analyses including, but not limited to, the following:
 - As a part of the Annual Work Plan, determine the biological studies, reports, and focused surveys that need to be undertaken in the Preserve.
 - Conduct biological reconnaissance and biological field surveys, including focused surveys for threatened or endangered species (e.g., CAGN, CACW) and/or monitoring of these species per USFWS monitoring protocols.
 - Assist in the preparation of biological resource reports meeting City, County, State of California, and federal criteria.
- Provide science-based technical recommendations to POM staff and any contractors hired for specific management tasks for survey design, monitoring protocols, data collection and analysis, and adaptive management programs.

3.2.3 Adaptive Management

- Prioritize threats to the Preserve and provide guidance to POM staff on direct management actions to deal with those threats.
- Prepare and coordinate implementation of plans for comprehensive eradication and control of exotics. This may include mapping exotic species infestations and detailing methods to employ to remove such infestations.
- Develop and/or coordinate implementation of biological restoration programs, including ecological restoration/creation plans for any sensitive habitat, sensitive floral or faunal species, and erosion control plans.
- Provide specialized biological assistance required for the preparation of the restoration program, including wetland and sensitive habitat delineation, and vegetation and wildlife assessment.
- Develop revegetation plans, cost estimates, and specifications for plan implementation.
- Develop irrigation plans, cost estimates, and specifications for plan implementation.
- Develop and/or implement restoration monitoring plans and monitoring schedules.

- Perform restoration monitoring.
- Continuously evaluate the effectiveness and efficiency of Preserve management activities in view of available resources and ensure consistent use of the most cost-effective methods for management.

3.2.4 Reporting

- Prepare and submit monthly reports for the first year and quarterly reports for subsequent years to POM staff. These reports shall summarize field observations including, but not limited to, the following:
 - List of species observed during the observation period.
 - Areas in need of invasive control, remediation, and/or restoration.
 - Management and monitoring tasks recommended to be implemented.
 - Prioritization of the above-mentioned management and monitoring tasks.
 - Basic stewardship activities.
 - Progress towards completion of the annual Work Program.

3.2.5 Other services that may be required

- Prepare and/or assist in identifying discrepancies in management and monitoring requirements between the adopted MSCP Subarea Plans for the County and City and the Otay Ranch Phase 2 RMP.
- Assist in the preparation of grant proposals to apply for additional funding for Preserve management tasks beyond what is needed to be consistent with the RMP and MSCP.
- Assist in the technical revisions of Phase 2 RMP and provide recommendations for prioritization and implementation of resource management directives.

4.0 Salt Creek

The following sections describe tasks that were performed from the onset of RECON's role as PSB through the end of the 2009-2010 fiscal year. This time period spans from October 2009 through June 2010. Tasks performed at Salt Creek parcels are discussed in detail in separate sections below.

Tasks at Salt Creek parcels included:

- Reconnaissance site visits to document access issues, illegal dumping, and previously undocumented flora and fauna.
- Photographic monitoring.
- Focused rare plant surveys.
- Invasive plant treatment.
- Protocol surveys for CAGN.
- Presence/Absence surveys for CACW.
- Avian point counts.
- Quino checkerspot butterfly (QCB, *Euphydryas editha quino*) habitat photo monitoring.

Tasks at San Ysidro parcels included:

- Reconnaissance site visits to document access issues, illegal dumping, and previously undocumented flora and fauna.
- Photographic monitoring.
- Focused rare plant surveys.
- Invasive plant treatment.
- Protocol surveys for CAGN.
- Avian point counts.
- QCB habitat photo monitoring.

4.1 Survey Methods

4.1.1 Regularly Scheduled Site Visits

RECON personnel conducted regularly scheduled visits to Salt Creek approximately once a month. The purpose of the site visits was to document any access issues, illegal dumping, new species, weeds, and the overall health of Salt Creek. Site visits occurred on varying weekdays and times to observe possible trespassing issues during a broad

range of time. Access issues, illegal dumping, and newly documented flora and fauna are discussed separately in Section 4.2, Results and Discussion. Regularly scheduled site visit dates and personnel for Salt Creek are presented in Attachment 1: Table 1.

4.1.2 Photographic Monitoring

Photographic monitoring point locations were determined in the field and recorded using a hand held Trimble® Global Positioning System (GPS) unit. The photo monitoring point locations were chosen so that they provided a broad view of representative vegetation communities in the Preserve. The GPS accuracy and direction of the photos were recorded (Figure 3). Diagnostic features were mindfully placed in each photo to make relocating the exact location easier in future years. The diagnostic features were chosen so that changes to the landscape, i.e. fire or weed encroachment, would minimize change to the visibility of the feature. The photo monitoring points will be repeated a minimum of every three years so that changes in native vegetation and weed cover can be detected over time. Additional photo monitoring point locations may be added in the future.

4.1.3 Flora

Previously undocumented invasive, non-sensitive, and rare plant species were recorded during regularly scheduled site visits. In addition, focused rare plant surveys were conducted and those efforts are described below.

4.1.3.1 Rare Plants

Previous focused rare plant surveys were conducted in April and May 2009 (one survey in mid-April and four surveys in early May) (Dudek 2009). The 2009–2010 rainy season produced a significant amount of rainfall. To take advantage of the good growing conditions, RECON biologists conducted additional rare plant surveys during the spring and summer of 2010.

In order to document additional rare plant species or populations, surveys during the 2010 season were conducted three times to capture early and late blooming species: once in April, early June, and late June. At the Salt Creek parcel, the primary target species for rare plant surveys was variegated dudleya (*Dudleya variegata*), an MSCP Narrow Endemic Species. RECON botanists Mark Doderer and Anna Bennett conducted the surveys on the Salt Creek parcels. Rare plant surveys in 2010 were intended to expand the floral list and known locations of rare plants. Any rare and non-sensitive plant species that had not been previously documented were added to the floral list. Surveys were conducted by walking through suitable habitat during the typical flowering period for each species. The locations of rare plant populations were mapped with Trimble® GPS units. An estimate of the number of individuals was recorded. In addition to focused

Image source: Natural color representation of the NAIP 2009 aerial imagery.



-  Salt Creek
-  FUDS Area
-  Photopoint

FIGURE 3

surveys, any incidental sighting of rare species were recorded during regularly scheduled site visits.

4.1.3.2 Invasive Plant Species

Priority for treating invasive species was based on several criteria (in no specific order): Early Detection Rapid Response (EDRR), California Invasive Plant Council (Cal-IPC) ratings, feasibility of successful control, and threat to sensitive species. All four of these factors were taken into consideration when determining treatment priority for invasive species. Prior to implementing a weed abatement program, the PSB will need approval from the POM.

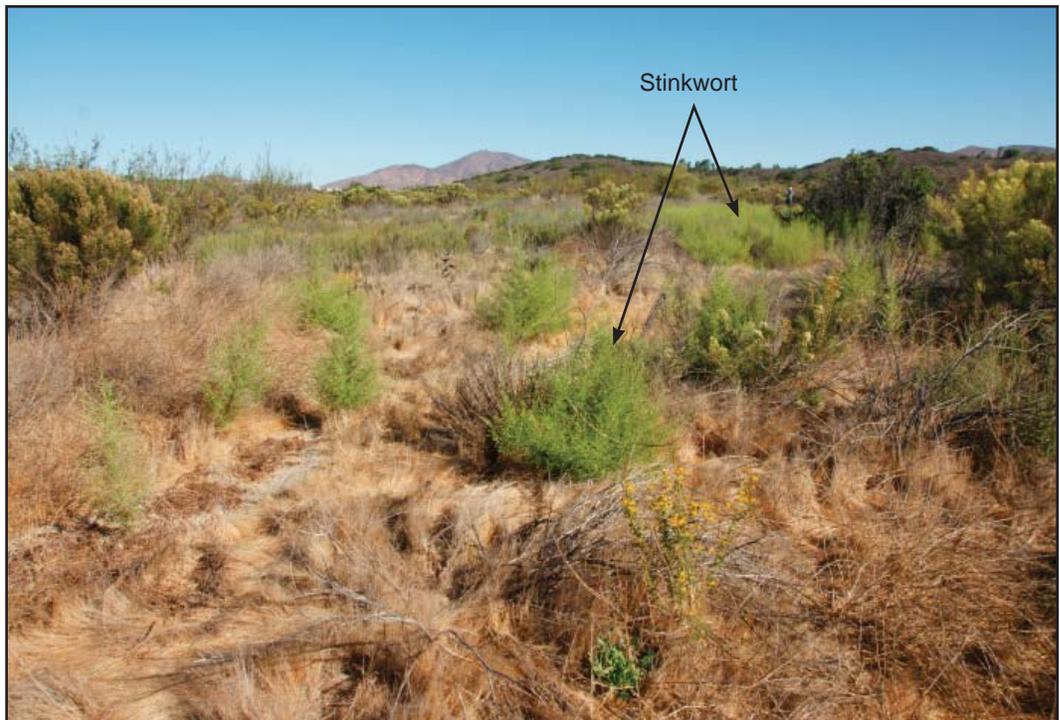
Stinkwort (*Dittrichia graveolens*) was the only species of priority of control in 2009-2010, since the invasion is recent and manageable. Stinkwort was identified in the Salt Creek parcels by the PSB in fall of 2009 (Photographs 3 and 4). Stinkwort is a recent invader to southern California, and therefore to the Preserve. Following the EDRR method and a Cal-IPC moderate (alert) rating, stinkwort is a high-priority species for management at Salt Creek because the populations of this species are still relatively small. At Salt Creek, a concentration of stinkwort was located in the north-central portion of the Preserve just east of the Salt Creek drainage. The population consisted of several hundred individuals and was considered to be at a manageable size. A focused update survey for stinkwort was conducted in June 2010, since this species does not flower until late summer/early fall. Control measures were implemented in June 2010, prior to flowering.

RECON certified herbicide applicators implemented weed abatement under the supervision of the PSB. Applications of glyphosate based herbicide were used to control stinkwort (Photographs 5 and 6). Follow-up monitoring by RECON biologists took place after weed abatement was implemented to determine if the control methods were effective. After herbicide treatment, monitoring for stinkwort was conducted approximately once every two weeks to determine if additional herbicide treatment or pulling individuals by hand was required. Follow-up monitoring will occur in the fall of 2010 to locate individuals that were not previously observed.

4.1.4 Fauna

4.1.4.1 Coastal California Gnatcatcher

As stated in the Phase 2 RMP (2002), CAGN studies shall be conducted throughout a 35-year period. The goal of the surveys is to detect significant changes to populations over time rather than annual population fluctuations. According to the Phase 2 RMP, upon land conveyance, CAGN surveys are to take place once a year for five years, then



PHOTOGRAPH 3
Stinkwort (*Dittrichia graveolens*) Infestation, Salt Creek



PHOTOGRAPH 4
Closeup of Stinkwort, Salt Creek



PHOTOGRAPH 5
RECON Crew Applying Herbicide to Stinkwort



PHOTOGRAPH 6
Stinkwort Treated with a Glyphosate Based Herbicide

once every three years. To be consistent with the baseline surveys conducted by Dudek (2009), all suitable CAGN habitat was surveyed at the Salt Creek parcels following the USFWS protocol survey methods used by Dudek for baseline study methods (Dudek 2009). RECON biologists permitted to survey CAGN were responsible for monitoring.

Dudek conducted baseline surveys in July and August 2009, which served as the first survey in the annual five-year survey set. RECON conducted surveys in April, May, and June 2010, which served as the second survey in the five-year survey set. At Salt Creek, approximately 430.6 acres of suitable CAGN habitat was identified. The Salt Creek parcels were divided into six survey areas.

Protocol survey methods within a Natural Community Conservation Planning (NCCP) area require three surveys per site and are to occur between February 15 and August 30. Surveys are to be conducted between 6 A.M. and 12 P.M., at a rate no greater than 15 acres per hour per person. Survey visits at each location are to be performed no less than seven days apart (USFWS 1997). The Salt Creek parcels are within an NCCP area.

RECON biologists Erin McKinney and Beth Procsal (permit number TE-797665), assisted by Anna Bennett, Peter Dolan, Brenna Ogg, and Jillian Bates, conducted the focused surveys for CAGN in April, May, and June 2010. The surveys were conducted in accordance with USFWS survey protocol (USFWS 1997) for lands within an NCCP area. Permitted biologists used recorded vocalizations to increase the probability of detecting nearby CAGN. After a bird had responded, the use of the recorded vocalizations was discontinued in an effort to not harass this sensitive species. The primary goal of these surveys is to gain as much information as possible about the locations, size of use areas, and breeding success of the birds present within the Otay Ranch Preserve. Surveyors identified the locations of all CAGN encountered, collected data as to the number of birds observed, pair status, extent of use area observed, breeding status of pairs, and any ancillary nest information, as available. An attempt was made to have the same surveyor(s) assigned to the same area(s) over several surveys to provide continuity in data collection and understanding of the use by CAGN in the area.

Survey methods included walking slowly through areas with high potential to support CAGN. Areas with deep canyons, steep terrain, and thick shrub cover were surveyed more slowly. As part of the survey efforts, RECON biologists evaluated the vegetation communities of the Salt Creek survey areas for suitable nesting habitat for CAGN. Dominant plant species within the survey areas include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), San Diego County viguiera (*Bahiopsis laciniata*), and laurel sumac (*Malosma laurina*), which typify foraging and nesting habitat for CAGN. All bird species observed during the surveys were noted. Survey dates, times, and weather conditions are provided in Attachment 1: Table 2.

The pre-survey notification letter to the USFWS, dated March 25, 2010, listed potential suitable habitat within Salt Creek as 580.0 acres. However, during the protocol surveys there were portions of the proposed survey areas that were determined to be unsuitable habitat for CAGN. The habitats, which do not support CAGN, include annual grassland, southern willow scrub, freshwater marsh, disturbed land, eucalyptus woodland, scrub oak and mixed chaparral, and developed lands. As a result, approximately 149.4 acres of unsuitable habitat were removed from the total survey area for Salt Creek. After removing unsuitable habitat, the total acreage of suitable habitat for CAGN within Salt Creek is 430.6 acres, respectively.

The revised survey area is shown in Figure 4. The southwestern corner of Salt Creek is located in a Formally Used Defense Site (FUDS) area; therefore, surveys cannot occur due to safety issues (see Figure 4). Consequently, this portion of Salt Creek was excluded from the survey areas.

4.1.4.2 Coastal Cactus Wren

A survey intended to detect occupancy by CACW in suitable habitat at Salt Creek was performed in 2009-2010. Occupied and unoccupied coast cholla (*Cylindropuntia prolifera*) habitat was visited to document presence or absence of CACW.

Over a three-day period in spring (May–June; Attachment 1: Table 3), RECON biologists established CACW photo monitoring point locations and documented occupancy by direct observation of the birds and active nests, or by call. Locations of CACWs and CACW nests were mapped using a Trimble® GPS; photo monitoring points were established and photos were taken at those points (Figure 5). The purpose of the photo monitoring points is to detect changes in habitat quality (i.e., weed invasion or shrub encroachment) over time. The presence of weed species and other threats to the habitat were also recorded.

A CACW habitat enhancement program funded by a Transnet grant was initiated during the fall of 2009 by Merkel and Associates under contract with the County. Coast cholla cuttings were planted in a disturbed area in Salt Creek to increase the amount of available nesting habitat for CACWs.

RECON biologists Beth Procsal, Anna Bennett, and Raquel Atik conducted focused surveys for CACW in May and June 2010 within Salt Creek. In addition to recording all CACW detected, surveyors identified the locations of all CACW nests encountered using a Trimble® GPS, established 44 photo monitoring points, and collected data as to the pair status, extent of use area observed, size and height of cholla patch the nest was in, height of nest from the ground, and any ancillary nest information, as available. The information collected for the photo points include CACW detected, CACW nests, and suitable nesting habitat for CACW which contained no nests. The primary goal of these surveys was to gain as much information as possible about the locations of nests and

Image source: Natural color representation of the NAIP 2009 aerial imagery.

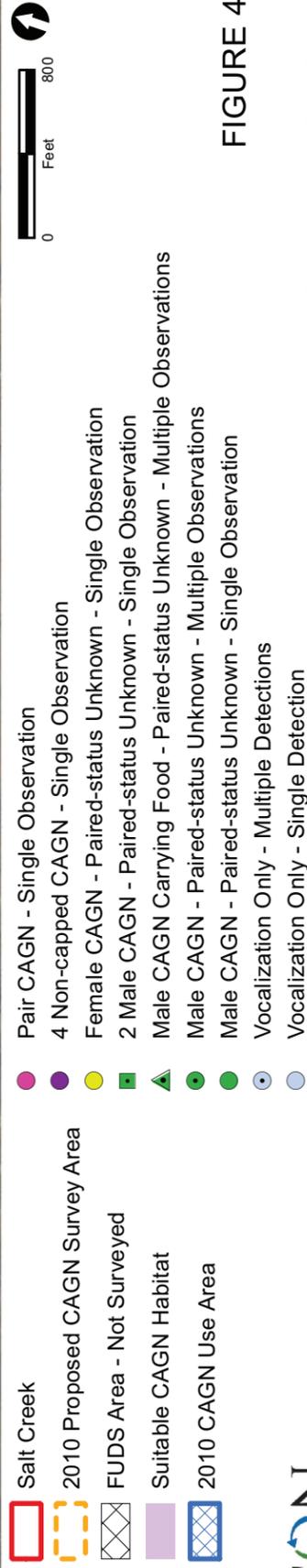
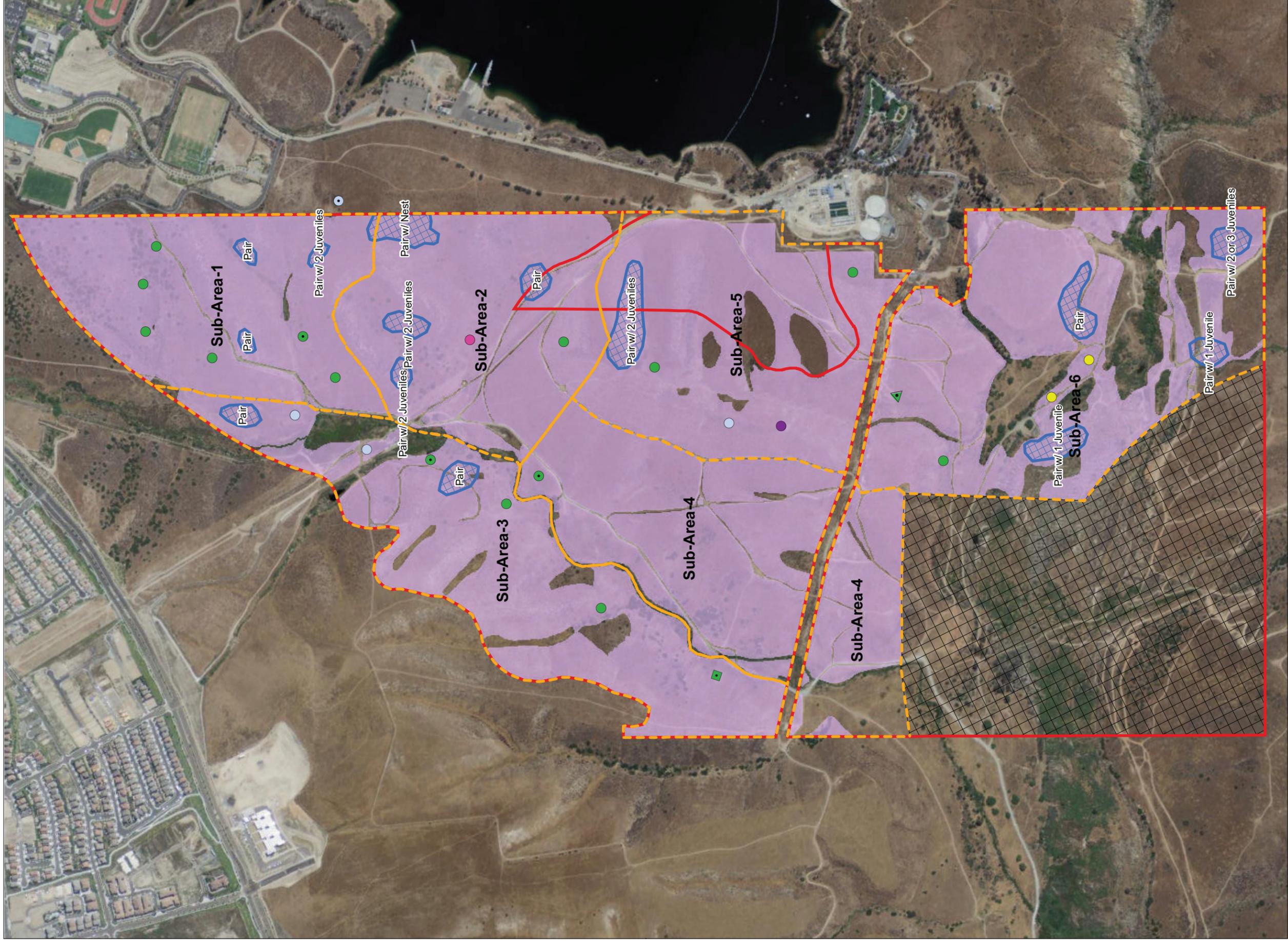
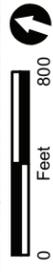


FIGURE 4

Image source: Natural color representation of the NAIP 2009 aerial imagery.



□ Salt Creek ○ Coastal Cactus Wren Photographic Monitoring Points

FIGURE 5
FY 2009-2010 Coastal Cactus Wren
Photographic Monitoring Locations, Salt Creek

birds, size of use areas, and if this species is successfully breeding within the Otay Ranch Preserve.

4.1.4.3 Avian Point Counts

The six set point-count locations were marked with a GPS and established by Dudek within coastal sage scrub and riparian habitats at Salt Creek. The methods are the same used by Dudek (2009). After arriving to each point location, the surveyors waited for three minutes before beginning the survey to allow time for wildlife to resume activity. All bird species were identified either by visual or aural means. Birds that flew over the sites were also noted. Only different individuals of a given species were counted.

RECON biologists John Lovio, Beth Procsal, and Erin McKinney conducted the second year of avian point-count surveys by visiting six designated locations within Salt Creek and tallying all bird species within a 50-meter survey area for 10 minutes (Figure 6). One set of diurnal and nocturnal surveys were conducted at Salt Creek during each of the following months: April, May, and June (Attachment 1: Table 4 for personnel times, dates, etc), in order to increase the opportunities for detecting resident, migrant, territorial, and transient bird species. To account for species that may be more easily detected at certain times of the day/night (dawn/dusk), the timing for surveying at each point location was shuffled so that each location was surveyed at various times of the morning, day, and night.

4.1.4.4 Quino Checkerspot Butterfly Habitat Assessment

In 2009, Dudek surveyed for QCB and found occupied habitat at Salt Creek (Dudek 2009). In 2010, RECON established photo monitoring points at known QCB locations and documented threats to QCB habitat (Figure 7). In order to manage occupied QCB habitat, a stand-alone plan would need to be prepared and submitted to the POM for review. Implementation of a weed control program in occupied QCB habitat would require coordination with USFWS due to the possibility of take of QCB larvae during weed control efforts.

A habitat quality assessment for known QCB-occupied locations was conducted in April 2010. Each occupied site mapped by Dudek in 2009 was visited, and species of weeds present at each site were recorded. In many cases, the locations where the adult QCB were observed by Dudek were not at the same location as the associated larval food plants, e.g. dot-seed plantain (*Plantago erecta*). The larval food plants were often found downslope from the hilltop areas where the adults tend to be observed. Additional threats, such as vehicle encroachment, were also documented. This information will be used to guide future habitat management actions for QCB so that weed control strategies can be developed to reduce the chance of habitat degradation and to

Image source: Natural color representation of the NAIP 2009 aerial imagery.



-  Salt Creek
-  Avian Point Count Locations
-  FUDS Area
-  50 Meter Buffer

FIGURE 6

Image source: Natural color representation of the NAIP 2009 aerial imagery.



- Salt Creek
- ▲ QCB Observation Points 2009
- RECON QCB Photographic Monitoring Point

FIGURE 7

FY 2009-2010 Quino Checkerspot
Habitat Assessment, Salt Creek

determine if signage of these sensitive habitat areas would help reduce disturbance by vehicles.

4.2 Results and Discussion

4.2.1 Regularly Scheduled Site Visits

4.2.1.1 Access Issues

Issues of fence and gate integrity were identified by the PSB during weekly site visits. During the preliminary assessment at the Salt Creek parcels, a large portion of the southern Preserve boundary fence was found to be in need of repair, existing gates were found being permanently left open, and new gates would need to be installed to control access along the southern boundary of the Preserve in the Otay River Valley (Photograph 7 and Figure 8). Also, the entrance gate off Wueste Road into Salt Creek was observed to have been left open in the fall of 2009. One additional section of the eastern perimeter fence (approximately 20 feet) was found cut at Salt Creek. This area is located just north of the locked access gate and is in need of repair (see Figure 8). Signs of trespassing around the preserve included observations of occasional motorcycle and mountain bicycle riders as well as grazing horses and cows within the Salt Creek parcels (Photographs 8 and 9). The horses and cows are entering the preserve from the south.

As directed by the POM, during the monthly site visit in March 2010, RECON biologists mapped the sections of downed fence to determine the length of fence that would need to be repaired. At the same time the locations of gates that are left open and areas where new gates would need to be installed to restrict access were also mapped. To assess the amount of fence that would need to be repaired along the southern boundary of the Salt Creek parcel, RECON biologists walked the southern perimeter fence and documented fence repair locations, where gates are present but are left open for USBP access, and where new gates would need to be installed to restrict access (see Figure 8). The mapping effort indicated that the total linear distance of fence that would need to be repaired and/or replaced is about one-half mile (approximately 2,681 linear feet). Two of the existing gates along the southern Preserve boundary are currently open and are indicated on Figure 8. In addition to the open gates, two other locations were identified where dirt roads cross the southern boundary that could have new gates installed.

A complicating factor for access control at Salt Creek is the existence of multiple uncontrolled access points on the southern and western boundary of the Salt Creek parcel. Some of the access points are located outside of the Preserve, on lands not controlled by the POM. Any plan to control access at the off-site locations would require



PHOTOGRAPH 7
Southern Boundary Fence



PHOTOGRAPH 8
Off Highway Vehicles, Salt Creek



PHOTOGRAPH 9
Grazing Horse, Salt Creek

coordination with other land owners at the direction of the POM. Any changes to access and proposed closures shall also be coordinated with USBP.

Repair of the southern fence and installation of new gates was not implemented because much of the fence repair area along the southern boundary is also located within the FUDS, an area that is off-limits for safety reasons. A recommended alternative to fencing would be to install additional Preserve signs and using adequate safety precautions at each road along the southern and western boundaries (Photograph 10). We recommend that any Preserve signs installed along the southern and western boundary of Salt Creek would also address the issue of illegal grazing of animals in the Preserve.

At the direction of the POM, signs informing the public of the sensitive resources in the Preserve may be installed at unsecured access points. Potential sign locations were mapped by RECON and can be seen on Figure 8.

4.2.1.2 Illegal Dumping

During a reconnaissance site visit, illegal dumped trash was observed within the Salt Creek parcels near the southern boundary. Discarded old clothes and backpacks are occasionally found scattered around the preserve. In addition, an abandoned vagrant camp was observed in the southwestern corner of Salt Creek (see Figure 8). The PSB shall remove the trash at both the southern boundary location and the abandoned vagrant camp upon POM approval, since it is located within the FUDS area.

4.2.2 Photographic Monitoring

In 2010, 53 photo monitoring points were established at the Salt Creek parcels. The photo monitoring points will be repeated a minimum of every three years so that changes in native vegetation and weed cover can be detected over time. Additional photo monitoring point locations may be added in the future. Photo monitoring points were established over a two day period (see Attachment 1: Table 1).

4.2.3 Newly Documented Flora and Fauna

Previously undocumented rare, invasive and non-sensitive plant and wildlife species were document during regularly scheduled site visits. Rare plant species documented during the site visits are included on Figure 9. Rare wildlife species documented during reconnaissance site visits are included on Figure 10. Previously undocumented invasive plant species are included on Figure 11. Fifty-five previously undocumented plant species were recorded in 2009-2010. Eighty-three wildlife species were detected at Salt Creek in 2009-2010. During regularly scheduled visits to the preserve, non-sensitive species observed in the preserve included, but were not limited to, coyote (*Canis*



PHOTOGRAPH 10
Previously Installed Preserve Signs at Salt Creek

Image source: Natural color representation of the NAIP 2009 aerial imagery.



- | | | | | | |
|---|--|---|------------------------|---|----------------------------------|
|  | Salt Creek |  | Sensitive Flora |  | South Coast Saltbush: CNPS 1B.2 |
|  | Snake Cholla: MSCP Covered Species, Narrow Endemic & CNPS 1B.1 |  | |  | Desert fragrance: CNPS 2.2 |
|  | Variegated Dudleya: MSCP Covered Species, Narrow Endemic & CNPS 1B.2 |  | |  | Munz's sage: CNPS 2.2 |
|  | San Diego Goldenstar: MSCP Covered Species & CNPS 1B.1 |  | |  | Graceful Tarplant: CNPS 4.2 |
|  | Tecate Cypress: MSCP Covered Species, CNPS 1B.1 |  | |  | Palmer's Grapplinghook: CNPS 4.2 |
|  | Nuttall's Scrub Oak: CNPS 1B.1 | | | | |

FIGURE 9

Image source: Natural color representation of the NAIP 2009 aerial imagery.



 Salt Creek

Sensitive Fauna

-  Least Bell's Vireo: Federally Endangered, California Endangered & MSCP Covered Species
-  Coastal California Gnatcatcher (Detected Outside of Protocol Surveys): Federally Threatened, California Species of Special Concern & MSCP Covered Species
-  Belding's Orange-throated Whiptail: MSCP Covered Species & California Species of Special Concern
-  Coast Horned Lizard: MSCP Covered Species & California Species of Special Concern
-  San Diego Black-tailed Jackrabbit: California Species of Special Concern

FIGURE 10
FY 2009-2010 Additional Incidental Sightings
of Sensitive Fauna, Salt Creek

Image source: Natural color representation of the NAIP 2009 aerial imagery.



Legend

 Salt Creek	● Invasive Species	● Bermuda Grass: Cal-IPC Moderate
● Fennel: Cal-IPC High	● Fennel: Cal-IPC High	■ Milk Thistle: Cal-IPC Limited
● Giant Reed: Cal-IPC High	■ Peruvian Pepper Tree: Cal-IPC Limited	■ Smilo Grass: Cal-IPC Limited
● Stinkwort: Cal-IPC Moderate (Alert)		



FIGURE 11

FY 2009-2010 Additional Incidental Sightings of Invasive Plant Species, Salt Creek

latrans) Pacific treefrog (*Pseudacris regilla*), roadrunner (*Geococcyx californianus*) and killdeer (*Charadrius vociferous*) (Photographs 11-14). Not all of these species were previously undocumented; however, past reports did not distinguish which species occur at Salt Creek and/or San Ysidro. Lists of previously undocumented plants and wildlife are shown in Attachment 1: Tables 5 and 6.

4.2.3.1 Rare Plants

a. MSCP Covered Species

At the Salt Creek parcel, the primary target species for rare plant surveys was variegated dudleya, an MSCP Narrow Endemic Species. New populations of sensitive species found at the Salt Creek parcels included approximately nine previously undocumented populations of variegated dudleya (Photograph 15), consisting of hundreds of individuals, and less than 100 individuals of snake cholla (*Cylindropuntia californica* var. *californica*) (Photograph 16), also an MSCP Narrow Endemic, that had previously not been documented. Two additional locations of Tecate cypress (*Hesperocyparis forbesii*), an MSCP covered species, were mapped in the southwestern side of the site. A population of San Diego goldenstar (*Muilla clevelandii*), an MSCP covered species, consisting of thousands of individuals was found in the southeastern corner of the Salt Creek parcels. San Diego goldenstar had not been reported previously at the Salt Creek parcels. Attachment 1: Table 7 lists rare plants at the Salt Creek parcels observed during 2009-2010.

b. Additional Sensitive Plant Species

Eight additional plant species, considered by CNPS to be sensitive, were also found at the Salt Creek parcels. These species include Nuttall's scrub oak (*Quercus dumosa*) CNPS 1B.1 (Photographs 17 and 18), south coast saltbush (*Atriplex pacifica*) CNPS 1B.2, desert fragrance (*Ambrosia monogyra*) CNPS 2.2, Munz's sage (*Salvia munzii*) CNPS 2.2, San Diego marsh-elder (*Iva hayesiana*) CNPS 2.2, graceful tarplant (*Holocarpha virgata* ssp. *elongata*) CNPS 4.2, Palmer's grapplinghook (*Harpagonella palmeri*) CNPS 4.2, and spiny rush (*Juncus acutus* ssp. *leopoldii*) CNPS 4.2. Attachment 1: Table 7 lists sensitive plant species observed at the Salt Creek parcels in 2009-2010.



PHOTOGRAPH 11
Coyote (*Canis latrans*) Observed at Salt Creek



PHOTOGRAPH 12
Pacific Tree Frog (*Pseudacris regilla*) Observed at Salt Creek



PHOTOGRAPH 13
Greater Roadrunner (*Geococcyx californianus*) Observed at Salt Creek



PHOTOGRAPH 14
Killdeer (*Charadrius vociferus vociferus*) Observed at Salt Creek



PHOTOGRAPH 15
Variegated Dudleya (*Dudleya variegata*), Salt Creek



PHOTOGRAPH 16
Snake Cholla (*Cylindropuntia californica*), Salt Creek



PHOTOGRAPH 17
Nuttall's Scrub Oak (*Quercus dumosa*), Salt Creek



PHOTOGRAPH 18
Stand of Nuttall's Scrub Oak, Salt Creek

4.2.3.2 Invasive Plant Species

Herbicide treatment was typically successful on individuals of stinkwort that were treated. Stinkwort appears to have multiple germination cycles, and additional germinants were observed post-herbicide treatment. These individuals were pulled by hand; care was taken not to break the tap root. The number of individuals pulled by hand was counted during each visit. Each treatment resulted in approximately the same number of individuals being pulled by hand, which further implies that this species has multiple germination periods.

4.2.4 Fauna

4.2.4.1 Coastal California Gnatcatcher

Within Salt Creek parcels, there are 18 CAGN use areas (see Figure 4). Nine families, five pairs, and four territorial males make up the 18 Salt Creek use areas. There is one point shown on Figure 4 of a CAGN not observed, but detected on two visits by vocalizations. This bird was not closely followed, as it was just outside of the eastern boundary of Subarea 1, and is not counted in the total number of use areas for Salt Creek. It is possible that this bird could have been part of one of the nearby pairs and foraging outside of its use area.

Shown on Figure 4, of particular note is the presence of a family of CAGN consisting of four or five individuals in the southeast corner of Subarea 6. This family was continually observed on slopes dominated by chamise chaparral. This vegetation community does not traditionally support CAGN, but is generally believed to do so only when in proximity to more typical breeding habitat, such as Diegan coastal sage scrub. This scenario is present at Salt Creek.

For the purposes of this study, a use area is defined as the extent of area each CAGN pair, family unit, or individual that was observed during the course of the survey, and includes information regarding nesting, feeding, and monitoring fledglings. Despite that the paired status of several observed CAGN could not be determined, it is important to map these observations as they enhance the overall picture of CAGN use at Salt Creek. Outside of the 18 use areas identified at Salt Creek, these observations of single male or female/non-capped CAGN represent the potential for additional pairs and/or family units which could not be determined during the surveys (see Figure 4). As young from earlier nests become more independent, the family unit can often travel further to the edges of their use areas to forage. Concurrently, pairs also begin to re-nest while attending to the fledglings, which can make detection of both adults during a given survey day a challenge. Lastly, as the adults begin to re-nest or complete their breeding season altogether, they will encourage the fledglings to leave the use area. This can lead to incidental sightings of individual juveniles in areas previously uninhabited, as the young

move through the open space to establish their own territory. Attachment 1: Table 8 provides a list of wildlife species observed during the CAGN survey.

4.2.4.2 Coastal Cactus Wren

During the CACW surveys, four pairs, one of which may have been with a juvenile, two individuals, and 36 CACW nests were detected within Salt Creek (Figure 12). Incidental sightings of CACW made on other surveys count for an additional five pairs and nine individuals (see Figure 12). Near photo point 40, an assumed pair was detected with a third CACW, as mentioned above, in the vicinity of several nests. This detection may indicate a family unit. Since CACW also use nests for roosting year-around and build multiple nests, the presence of a nest may not be indicative of breeding or the number of pairs on-site. No active nests with eggs or babies were detected.

4.2.4.3 Avian Point Count

There were a total of 37 bird species detected at Salt Creek (Attachment 1: Table 9). Bird species commonly observed at the site during the diurnal surveys include lesser goldfinch (*Carduelis psaltria hesperophilus*), bushtit (*Psaltriparus minimus minimus*), and song sparrow (*Melospiza melodia*). Interestingly, two diurnal species, the yellow-breasted (*Icteria virens auricollis*) and northern mockingbird (*Mimus polyglottos polyglottos*), were found to sing throughout the night at Salt Creek. Of all bird species detected at Salt Creek during the CAGN, CACW, and point-count surveys, nine are considered sensitive. All bird species observed, except the European starling (*Sturnus vulgaris*), are protected under the Migratory Bird Treaty Act.

The sensitive species detected on this site include two federally listed species, four species that are CDFG species of special concern, and six species covered under the City MSCP (2003) (Attachment 1: Table 10). The federally listed bird species that occur at Salt Creek include the threatened CAGN and endangered least Bell's vireo (*Vireo pusillus belli*). The CDFG species of special concern include CACW, yellow warbler (*Dendroica petechia*), grasshopper sparrow (*Ammodramus savannarum perpallidus*), and yellow-breasted chat. The City MSCP provides additional protection for the following species: CAGN, least Bell's vireo, CACW, southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), western bluebird (*Sialia mexicana occidentalis*), and northern harrier (*Circus cyaneus hudsonius*).

Image source: Natural color representation of the NAIP 2009 aerial imagery.



- CACW Individual Observed in Other Surveys
- CACW Nest
- CACW Habitat (Cholla Patch) - No Nests or CACW Observed

- Salt Creek
- CACW, Possible Family
- CACW Pair Observed
- CACW Individual
- CACW Pair Observed in Other Surveys

FIGURE 12
FY 2009-2010 Coastal Cactus
Wren Locations, Salt Creek

4.2.4.4 Quino Checkerspot Butterfly

Weed species documented at the occupied QCB sites during the spring of 2010 included filaree (*Erodium* spp.); smooth cat's ear (*Hypochaeris glabra*), and tocalote (*Centaurea melitensis*) as well as annual grasses such as wild oat (*Avena* spp.) and brome grasses (*Bromus* spp.). Any future weed control efforts will focus on these problematic species in QCB habitat.

5.0 San Ysidro

5.1 Methods

5.1.1 Reconnaissance Site Visits

RECON personnel conducted regularly scheduled visits to the San Ysidro parcels approximately once a month. The purpose of the site visits was to document any access issues, illegal dumping, new species, weeds, and overall health of the San Ysidro parcels. Site visits occurred on varying weekdays and times to observe possible trespassing issues during a broad range of times. Regularly scheduled site visit dates and personnel for San Ysidro are presented in Attachment 2: Table 11.

5.1.2 Photographic Monitoring Points

At San Ysidro, 31 photo monitoring points were established in 2009-2010. Photo monitoring point locations were determined in the field and recorded using a hand held Trimble® GPS. The photo monitoring point locations were chosen such that they provide a broad view of representative vegetation communities in the Preserve. The photo monitoring points will be revisited a minimum of every three years so that changes in native vegetation and weed cover can be detected over time. Additional photo monitoring point locations may be added in the future. Photo monitoring points were established over a three day period and are shown in Figure 13.

5.1.3 Flora

5.1.3.1 Rare Plants

In May 2009, two focused rare plant surveys were conducted by Dudek personnel (Dudek 2009). The 2009–2010 rainy season produced a significant amount of rainfall. To take advantage of the good growing conditions, RECON biologists conducted additional focused rare plant surveys during the spring of 2010.



- San Ysidro
- Photopoint

FIGURE 13

In order to document additional rare plant species or populations, surveys during the 2010 season were conducted three times to capture early and late blooming species: once in mid April, late May, and early June. RECON botanists Mark Dodero and Anna Bennett conducted the surveys on the San Ysidro parcels. Rare plant surveys in 2010 were intended to expand the floral list and known locations of rare plants. Any plant species, rare and non-sensitive, that had not been previously documented were added to the floral list (see Attachment 1: Table 5). Surveys were conducted by walking through suitable habitat during the typical flowering period for each species.

The locations of rare plant populations were mapped with Trimble® GPS units. An estimate of the number of individuals was recorded. In 2010, target species for rare plant surveys at San Ysidro included Dunn's mariposa lily (*Calochortus dunnii*), an MSCP Narrow Endemic species, and felt-leaf monardella (*Monardella hypoleuca* ssp. *lanata*) an MSCP Narrow Endemic species.

5.1.3.2 Invasive Plant Species

Priority for treating invasive species was based on several criteria (in no specific order): EDRR, Cal-IPC ratings, feasibility of successful control, and threat to sensitive species. All four of these factors were taken into consideration when determining treatment priority for invasive species. Prior to implementing a weed abatement program, the PSB will need approval from the POM. Stinkwort was the only species of priority of control in 2009-2010, since the invasion is recent and manageable.

Stinkwort was identified in the San Ysidro parcels by the PSB in fall 2009. Stinkwort is a recent invader to southern California, and therefore to the Preserve. Following the EDRR method and a Cal-IPC moderate rating, stinkwort is a high-priority species for management at San Ysidro because the populations of this species are still relatively small. At San Ysidro, stinkwort was documented sporadically within the northeastern drainage that flows in a westerly direction. The population consisted of less than 100 individuals and is considered to be a manageable size. Due to access issues, Stinkwort at San Ysidro was removed by hand rather than herbicide application. Plants were pulled prior to flowering. The vegetative material was left on-site. Follow up treatment occurred in 2009-2010, and additional treatment will occur in fall 2010-2011 if needed.

5.1.4 Fauna

5.1.4.1 Coastal California Gnatcatcher

Section 4.1.4.1 describes Phase 2 RMP (2002) requirements for CAGN surveys within the Preserve. RECON biologists permitted to survey CAGN were responsible for monitoring CAGN at San Ysidro. Dudek conducted baseline surveys at the San Ysidro

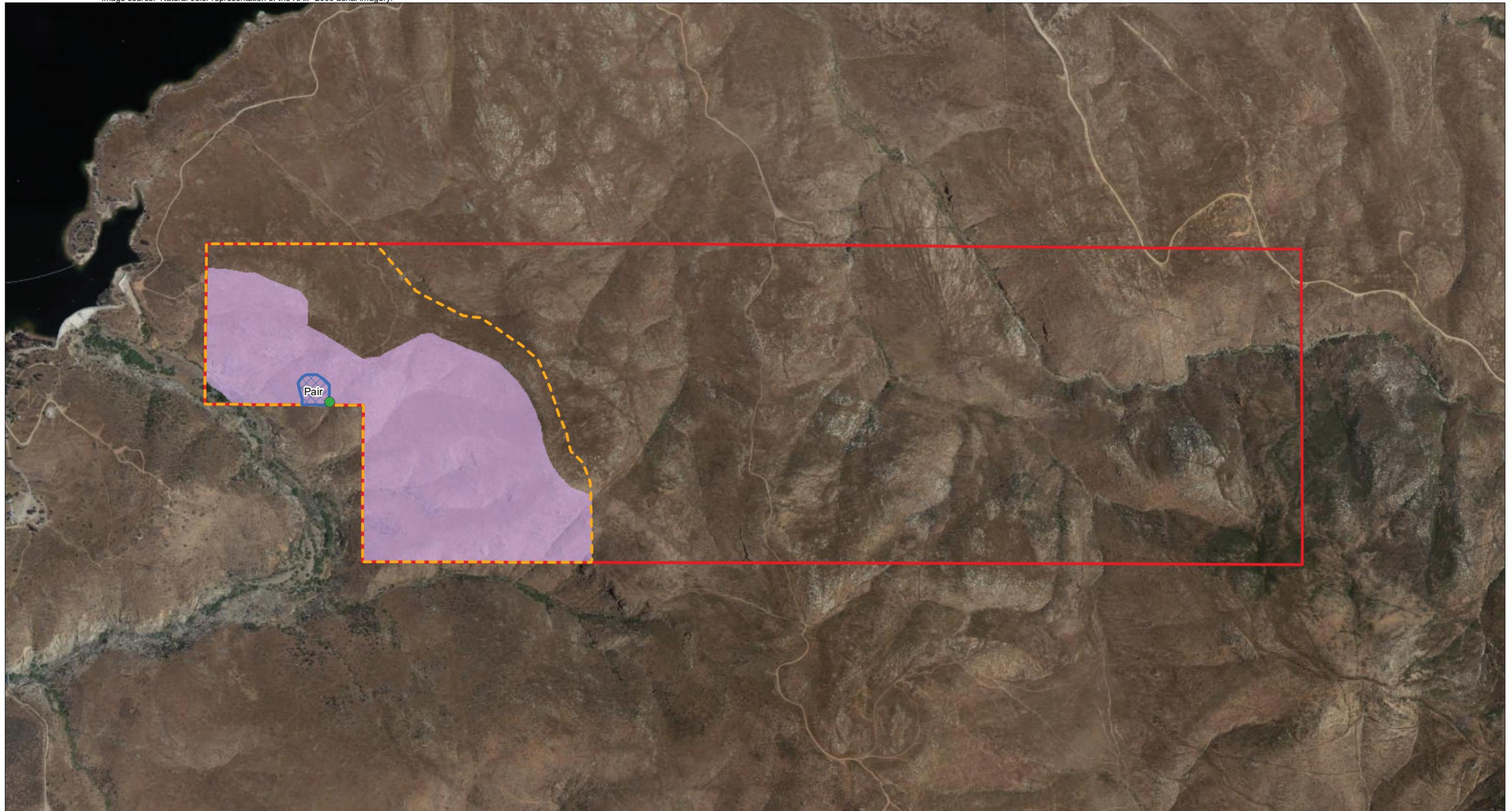
parcels in August 2009, which served as the first survey in the annual five-year survey set. RECON conducted surveys in May 2010, which served as the second survey in the five-year survey set. Approximately 68.3 acres of potential habitat were identified at the San Ysidro parcels. All 68.3 acres at the San Ysidro parcels were considered one survey area.

Survey methods remained consistent with the methods used by Dudek in 2009. Protocol survey methods within an NCCP area require three surveys per site and are to occur between February 15 and August 30. Surveys shall be conducted between 6:00 A.M. and 12:00 P.M., at a rate no greater than 15 acres per hour per person. Survey visits at each location are to be performed no less than seven days apart (USFWS 1997). The San Ysidro parcels are within a NCCP area.

RECON biologists Erin McKinney and Beth Procsal (permit number TE-797665), assisted by Anna Bennett, conducted the focused surveys for CAGN in May 2010. The surveys were conducted in accordance with USFWS survey protocol (USFWS 1997). Permitted biologists used recorded vocalizations to increase the probability of detecting nearby CAGN. After a bird had responded, the use of the recorded vocalizations was discontinued in effort to not harass this sensitive species. The primary goal of these surveys is to gain as much information as possible about the locations, size of use areas, and breeding success of the birds present within the Otay Ranch Preserve. Surveyors identified the locations of all CAGNs encountered and collected data as to the number of birds observed, pair status, extent of use area observed, breeding status of pairs, and any ancillary nest information, as available.

Survey methods included walking slowly through areas with high potential to support CAGN. Areas with deep canyons, steep terrain, and thick shrub cover were surveyed more slowly. As part of the survey efforts, RECON biologists evaluated the vegetation communities of the San Ysidro survey areas for suitable nesting habitat for CAGN. Dominant plant species within the survey areas include California sagebrush, California buckwheat, San Diego County viguiera, and laurel sumac, which typify foraging and nesting habitat for CAGN. All bird species observed during the surveys were noted. Survey dates, times, and weather conditions are provided in Attachment 1: Table 2.

The pre-survey notification letter to the USFWS, dated March 25, 2010, listed the potentially suitable habitat within San Ysidro to be approximately 107 acres. However, during the protocol surveys there were portions of the proposed survey areas that were determined to be unsuitable habitat for CAGN. The habitats, which do not support CAGN, include annual grassland, disturbed land, and developed lands. As a result, approximately 38.7 acres were removed from the total survey area for San Ysidro. After removing unsuitable habitat for CAGN, the total acreage of suitable habitat for CAGN within San Ysidro is 68.3 acres, respectively. The revised survey areas are shown in Figure 14. Survey dates, times, and weather conditions are provided in Attachment 2: Table 12.



-  San Ysidro
-  2010 CAGN Use Area
-  2010 Proposed CAGN Survey Area
-  Revised 2010 Survey Areas/Suitable CAGN Habitat
-  Male CAGN - Paired-status Unknown - Single Observation



FIGURE 14

5.1.4.2 Coastal Cactus Wren

Suitable CACW habitat consisting of coast cholla is not present at the San Ysidro parcels; therefore, CACW presence/absence surveys were not conducted at this location.

5.1.4.3 Avian Point Counts

RECON biologists John Lovio, Beth Procsal, and Jillian Bates conducted the second year of avian point-count surveys by visiting four designated locations (Figure 15) and tallying all bird species within a 50-meter survey area for 10 minutes. After arriving to each point location, the surveyors waited for three minutes before beginning the survey to allow time for wildlife to resume activity. All bird species were identified either by visual or aural means. Birds that flew over the sites were also noted. Only different individuals of a given species were counted.

The set point-count locations were marked with a GPS and established by Dudek within annual grassland/disturbed southern mixed chaparral, annual grassland/disturbed coastal sage scrub, and coastal sage scrub at San Ysidro. One set of diurnal and nocturnal surveys were conducted at San Ysidro during the months of April, May, and June (Attachment 2: Table 13 for personnel times, dates, etc) in order to increase the opportunities of detecting resident, migrant, territorial, and transient bird species. To account for species that may be more easily detected at certain times of the day/night (dawn/dusk), the timing for surveying at each point location was shuffled so that each location was surveyed at various times of the morning, day, and night.

5.1.4.4 Quino Checkerspot Butterfly Habitat Assessment

In 2009, Dudek surveyed for QCB and found occupied habitat at San Ysidro (Dudek 2009). In 2010, RECON established photo monitoring points for QCB and documented threats to QCB habitat (Figure 16). In order to manage occupied QCB habitat, a stand-alone plan will be submitted to the POM for review. Implementation of a weed control program in occupied QCB habitat will require coordination with USFWS because of possible take of QCB larvae during weed control efforts.

A habitat quality assessment for known QCB-occupied locations was conducted in April 2010. Each occupied site mapped by Dudek in 2009 was visited, and species of weeds present at each site were recorded. Additional threats, such as vehicle encroachment, were also documented. This information will be used to guide future habitat management actions for QCB so that weed control strategies can be developed to reduce the chance of habitat degradation and to determine if signage of these sensitive habitat areas would help reduce disturbance by vehicles.

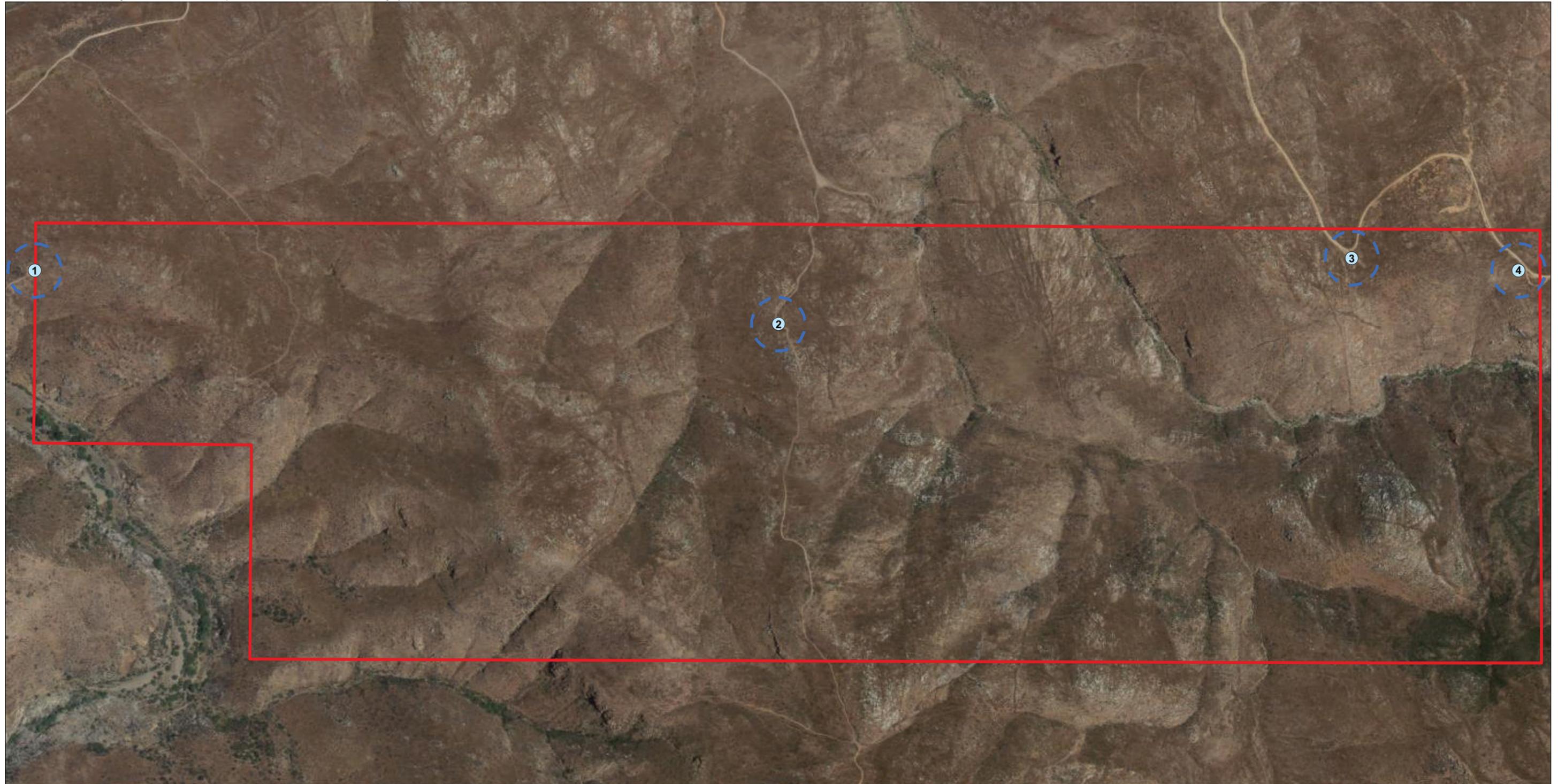


FIGURE 15



- San Ysidro
- ▲ QCB Observation Points 2009
- RECON QCB Photographic Monitoring Point

FIGURE 16

5.2 Results/Discussion

5.2.1 Reconnaissance Site Visits

Reconnaissance site visit dates and personnel are presented in Attachment 2: Table 11.

5.2.1.1 Access Issues

The San Ysidro parcels are located in a remote area with few roads allowing access to the site. Access issues primarily involve the ongoing work of the USBP. At the direction of the POM, signs informing the public of the sensitive resources in the San Ysidro parcels may be installed at unsecured access points.

5.2.1.2 Illegal Dumping

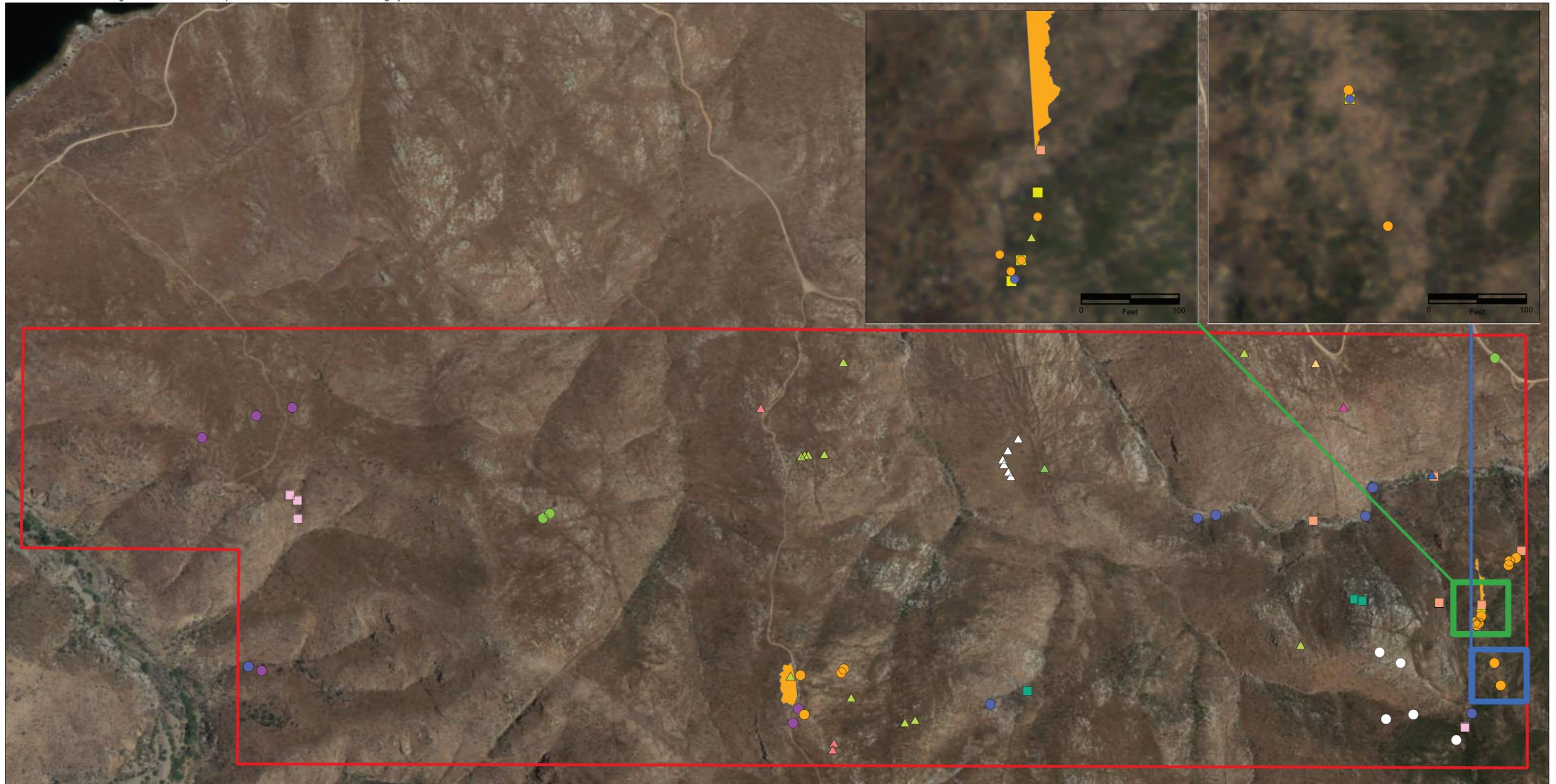
Illegal dumping was not observed within the San Ysidro parcels during 2009-2010. Small quantities of trash have been observed within drainages, along migrant trails, and USBP lookout locations.

5.2.1.3 Newly Documented Flora and Fauna

Rare plant species documented during reconnaissance site visits are included on Figure 17. Rare wildlife species documented during reconnaissance site visits are included on Figure 18. Previously undocumented invasive plant species are included on Figure 19. Lists of previously undocumented plants are shown in Attachment 2: Table 14. A list of wildlife species detected is shown in Attachment 2: Table 15 (Photographs 19-25). Not all of the wildlife species were previously undocumented; however, previous reports did not delineate which species occur at San Ysidro and/or Salt Creek.

5.2.2 Photographic Monitoring Points

The photo monitoring points will be revisited a minimum of every three years so that changes in native vegetation and weed cover can be detected over time. Additional photo monitoring point locations may be added in the future. Photo monitoring points were established over a three day period and are shown in Figure 13 and Attachment 2: Table 11.



San Ysidro **Sensitive Flora**

- Dunn's Mariposa Lily: California Rare, MSCP Covered Species, Narrow Endemic, CNPS 1B.2
- Variegated Dudleya: MSCP Covered Species, Narrow Endemic & CNPS 1B.2
- Gander's Pitcher Sage: MSCP Covered Species, Narrow Endemic, CNPS 1B.3
- San Diego Goldenstar: MSCP Covered Species & CNPS 1B.1
- Tecate Cypress: MSCP Covered Species, CNPS 1B.1

- Otay Mountain Lotus: CNPS 1B.1
- Otay-lilac: CNPS 1B.2
- Summer Holly: CNPS 1B.2
- Munz's sage: CNPS 2.2
- ▲ California Adder's Tongue: CNPS 4.2
- ▲ Chaparral Rein-orchid: CNPS 4.2

- ▲ Golden-rayed Pentachaeta: CNPS 4.2
- ▲ Ocellated Lily: CNPS 4.2
- ▲ San Diego County Needle Grass: CNPS 4.2
- ▲ Small-flowered Morning Glory: CNPS 4.2
- ▲ Western Dichondra: CNPS 4.2

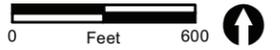


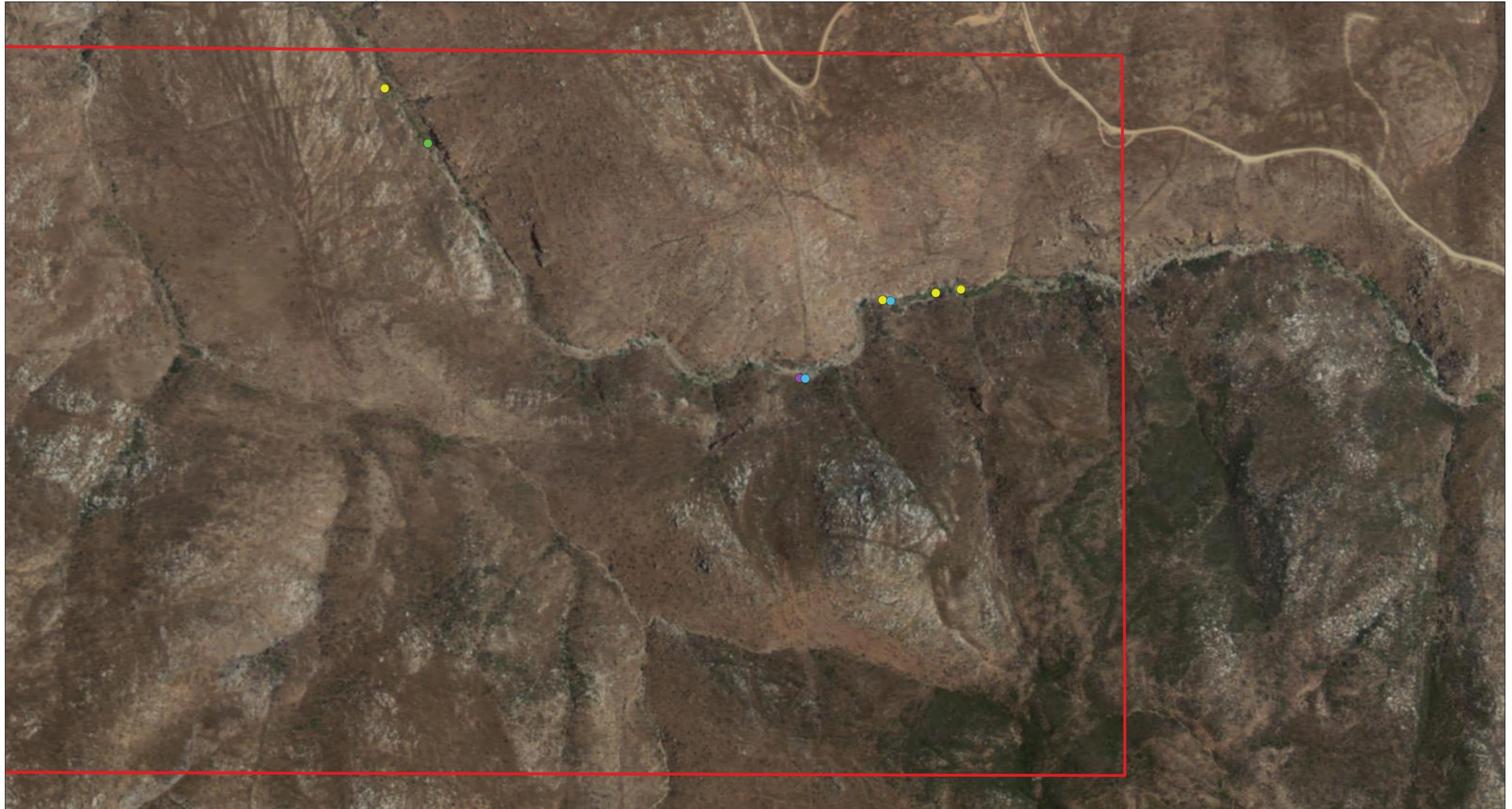
FIGURE 17



 San Ysidro **Sensitive Fauna**

-  Belding's Orange-throated Whiptail: MSCP Covered Species & California Species of Special Concern
-  Coast Rosy Boa: Federal Species of Concern
-  Red Diamond Rattlesnake: California Species of Special Concern
-  San Diego Black-tailed Jackrabbit: California Species of Special Concern

FIGURE 18
FY 2009-2010 Additional Incidental Sightings
of Sensitive Fauna, San Ysidro

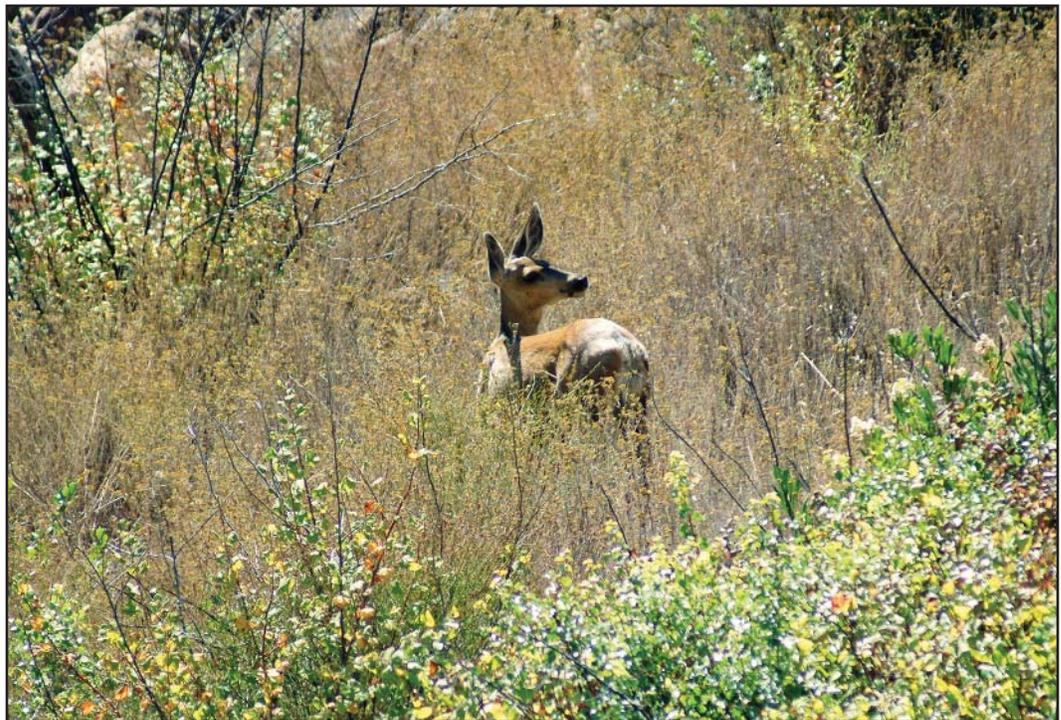


- San Ysidro **Invasive Species**
- Pampas Grass: Cal-IPC High
- Fennel: Cal-IPC High
- Stinkwort: Cal-IPC Moderate (Alert)
- Bull Thistle: Cal-IPC Moderate

FIGURE 19
FY 2009-2010 Additional Incidental Sightings
of Invasive Plant Species, San Ysidro



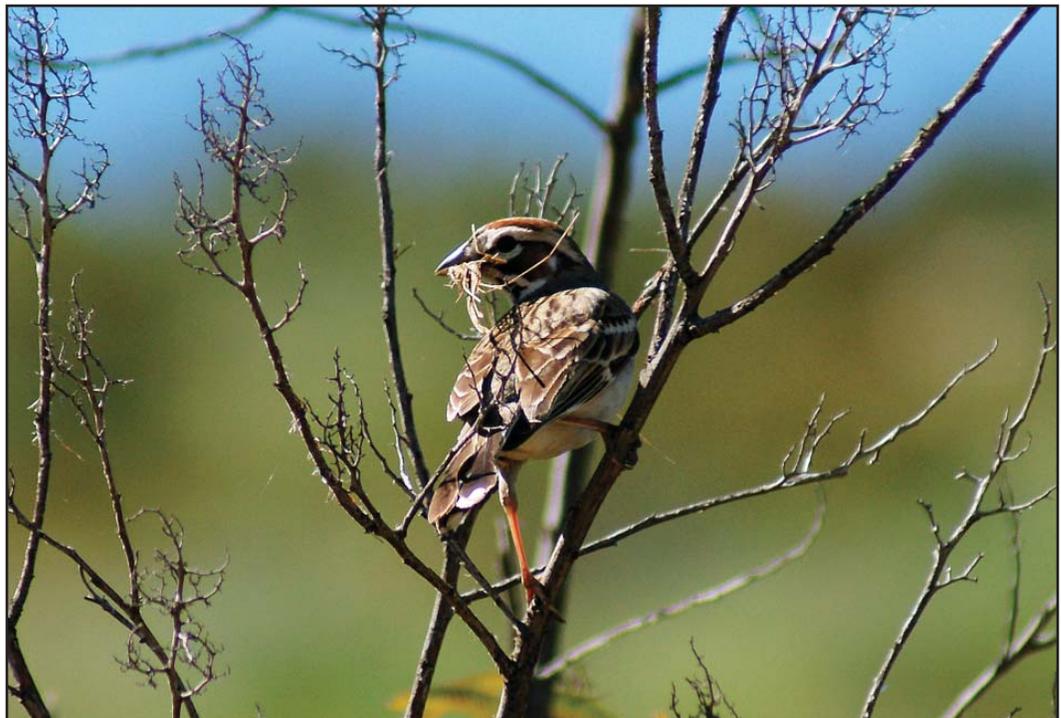
PHOTOGRAPH 19
Two-striped Gartersnake (*Thamnophis hammondi*), San Ysidro



PHOTOGRAPH 20
Mule Deer (*Odocoileus hemionus*), San Ysidro



PHOTOGRAPH 21
Coastal Rosy Boa (*Lichanura trivirgata roseofusca*), San Ysidro



PHOTOGRAPH 22
Lark Sparrow (*Chondestes grammacus*) with
Nest Building Material, San Ysidro



PHOTOGRAPH 23
Red Diamond Rattlesnake (*Crotalus ruber*),
San Ysidro



PHOTOGRAPH 24
Speckled Rattlesnake (*Crotalus mitchellii*), San Ysidro



PHOTOGRAPH 25
Southern Pacific Rattlesnake (*Crotalus oreganus helleri*), San Ysidro

5.2.3 Flora

5.2.3.1 Rare Plants

a. MSCP Covered Species

At the San Ysidro Preserve, one population totaling approximately 300 individuals of Dunn's mariposa lily was reported in the south central portion of the San Ysidro parcels by Dudek in 2009. According to Reiser (2001), Dunn's mariposa lily appears to be restricted to metavolcanic or gabbroic soils. San Miguel-Exchequer soil, which is a metavolcanic soil, is mapped throughout the San Ysidro parcels.

Due to the above average rainfall in 2010, additional populations of Dunn's mariposa lily were surveyed for in order to detect additional occurrences and to update the estimated number of flowering individuals at the known population. A focused survey to determine the extent of the population and threats was implemented in mid-May and early June. The 2010 surveys resulted in an expansion of the known population of Dunn's mariposa lily as well as an additional population in the southeastern corner of the site (see Figure 17 and Photograph 26).

In addition to Dunn's mariposa lily, additional MSCP covered species were mapped. Three additional locations of San Diego goldenstar were mapped along with six additional locations of Tecate cypress. Previously undocumented MSCP covered species include Gander's pitcher sage (*Lepechinia ganderi*) and variegated dudleya (an MSCP covered Narrow Endemic) (Photographs 27 and 28).

Felt-leaved monardella has moderate potential to occur at San Ysidro (Dudek 2009), but this species was not observed during the baseline surveys. According to Reiser (2001), felt-leaved monardella occurs within San Miguel-Exchequer soil at Otay Mountain sites. A focused survey for felt-leaved monardella took place at the same time as the survey for Dunn's mariposa lily. Felt-leaved monardella was not detected at San Ysidro in 2009-2010. A list of sensitive plant species observed is provided in Attachment 2: Table 16.

b. Additional Sensitive Plant Species

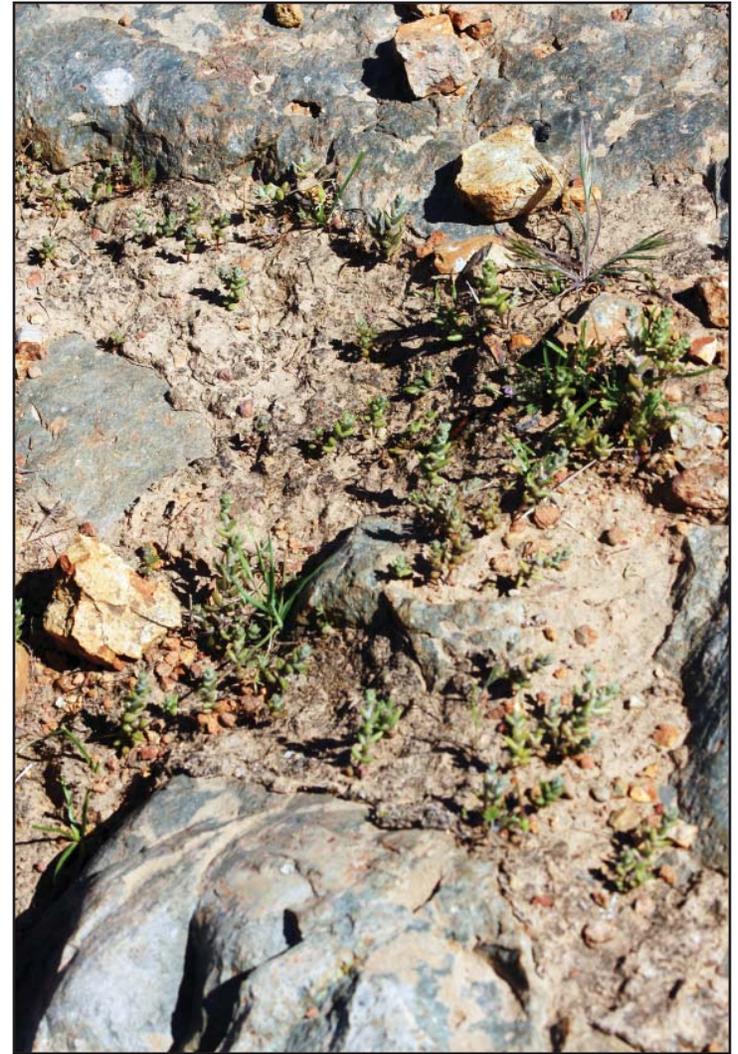
Twelve additional plant species, considered by CNPS to be sensitive, were also found at the San Ysidro parcels. These species include Otay Mountain lotus (*Lotus crassifolia* ssp. *otayensis*), CNPS 1B.1 (Photograph 29); Otay lilac (*Ceanothus otayensis*), CNPS 1B.2 (Photograph 30); summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), CNPS 1B.2; Munz's sage, CNPS 2.2; California adder's tongue (*Ophioglossum californicum*), CNPS 4.2; chaparral rein orchid (*Piperia cooperi*), CNPS 4.2 (Photograph 31); golden-rayed pentachaeta (*Pentachaeta aurea*), CNPS 4.2; ocellated lily (*Lilium humboldtii* ssp. *ocellatum*), CNPS 4.2; San Diego County needle grass (*Achnatherum diegoense*), CNPS 4.2; small-flowered morning glory (*Convolvulus simulans*), CNPS 4.2



PHOTOGRAPH 26
Dunn's Mariposa Lily (*Calochortus dunnii*), San Ysidro



PHOTOGRAPH 27
Gander's Pitcher Sage, (*Lepechinia ganderi*
Epling), San Ysidro



PHOTOGRAPH 28
Variegated Dudleya, San Ysidro



PHOTOGRAPH 29
Otay Mountain Lotus (*Lotus crassifolius*
var. *otayensis*), San Ysidro



PHOTOGRAPH 30
Otay Lilac (*Ceanothus otayensis*), San Ysidro



PHOTOGRAPH 31
Chaparral Rein Orchid (*Piperia cooperi*),
San Ysidro

(Photograph 32); western dichondra (*Dichondra occidentalis*), CNPS 4.2; and western spleenwort (*Asplenium vespertinum*), CNPS 4.2. Of these species, none had been previously documented within the San Ysidro parcels. Attachment 2: Table 16 lists sensitive species observed at the San Ysidro parcels in 2009-2010.

c. Invasive Plant Species

Stinkwort appears to have multiple germination cycles, and additional germinants were observed after the initial treatment of pulling by hand. Care was taken not to break the tap root when individuals were removed. Follow up treatment will be conducted in 2010-2011.

5.2.4 Fauna

5.2.4.1 Coastal California Gnatcatcher

Within San Ysidro, there is one CAGN use area (see Figure 14). One pair was detected within San Ysidro. The coastal sage scrub at the site is recovering from recent fires, and much of the shrub cover is sparse with non-native annual grasses dominating interspaces between shrubs. As the site recovers from past fires, CAGN may become more prevalent within the San Ysidro parcels. Attachment 2: Table 17 provides a list of wildlife species observed during the CAGN survey.

5.2.4.2 Coastal Cactus Wren

Suitable CACW habitat consisting of coast cholla is not present at the San Ysidro parcels; therefore, CACW presence/absence surveys were not conducted at this location.

5.2.4.3 Avian Point Counts

There were a total of 18 bird species detected at San Ysidro (Attachment 2: Table 18). Bird species commonly observed during the diurnal surveys include lesser goldfinch, bushtit, and song sparrow. Of the all bird species detected at San Ysidro in the CAGN and point-count surveys, two are considered sensitive (Attachment 2: Table 19). These bird species include the CAGN, both federally listed and covered by the City MSCP, and the southern California rufous-crowned sparrow, which is protected under the City MSCP. All bird species observed are protected under the Migratory Bird Treaty Act.

5.2.4.4 Quino Checkerspot Butterfly

Weed species documented at the occupied QCB sites during the spring of 2010 included filaree, smooth cat's ear, and tocalote, as well as annual grasses such as wild oat and



PHOTOGRAPH 32
Small-flowered Morning-Glory (*Convolvulus simulans*), San Ysidro

brome grasses. Vehicle tracks (a quad-type vehicle) were also observed at one of the eastern QCB habitat areas. Although no off-highway vehicle riders were seen during the site visits at San Ysidro, the vehicle use in the area may have been associated with reconnaissance patrols by the USBP.

6.0 Meetings and Coordination

The PSB regularly attended San Diego Management and Monitoring Coordination and South County Land Manager meetings to assure consistency with regional conservation efforts and plans.

7.0 Budget

For the 2009-2010 fiscal year, approximately \$110,200 was spent on items associated with the above mentioned tasks. Attachment 3: Table 20 provides a cost by task description.

8.0 Anticipated Tasks (FY 2010-11)

8.1 Access Issues

It is anticipated that the small section of fence that is in need of repair on the eastern boundary of Salt Creek will be repaired in FY 2010-11. Additional signs identifying the area as a preserve will also be installed at strategic locations.

8.2 Preserve Visits

RECON personnel shall conduct regularly scheduled visits to the Preserve every other week at Salt Creek and at San Ysidro. A suitable frequency of site visits at the 1,567 acres of newly conveyed lands will be determined and presented in the FY 2011-12 work plan after baseline surveys have been conducted. The frequency of site visits to Salt Creek is being reduced to every other week based on the budget and need to add future regularly scheduled visits to the newly conveyed lands.

8.3 Monitoring

In FY 2010–11, the PSB will:

- Conduct baseline surveys on lands conveyed in FY 2009-10 and 2010-11, which includes vegetation mapping and floral and faunal lists;
- Recommend focused surveys for conveyed lands in baseline reports after baseline surveys are complete;
- Conduct a focused survey to detect the presence of Thorne's hairstreak butterfly (*Callophrys (Mitoura) thornei*) at San Ysidro;
- Conduct presence/absence surveys and nest monitoring for least Bell's vireo (*Vireo bellii pusillus*) at Salt Creek;
- Report previously undocumented sensitive plant locations by collecting and submitting voucher specimens to the San Diego Natural History Museum; and
- Submit rare floral and faunal data to California Natural Diversity Database and South County Land Managers.

8.4 Meetings and Coordination

The PSB shall attend San Diego Management and Monitoring Program (SDMMP) meetings and coordinate with South County Land Managers (SCLM) to assure consistency with regional conservation efforts and plans. Meeting highlights, as they relate to the Otay Ranch Preserve, will be provided to the City and County POM staff after each attended meeting.

8.5 Reports

Quarterly summary reports shall be submitted to the POM. These reports will document any access issues, new site disturbances, new species, observed wildlife, and management tasks that were performed.

The quarterly reports will cover a time frame of:

- July 1–September 30
- October 1–December 31
- January 1–March 31
- April 1–June 30

9.0 References Cited

Chula Vista, City of

2003 Multiple Species Conservation Plan Subarea Plan. February.

Dudek

2009 Draft Existing Conditions Report for the Otay Ranch Preserve. August.

Otay Ranch POM Policy Committee

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Reiser, C. H.

2001 *Rare Plants of San Diego County*. Aquafir Press. July.

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2010 Otay Ranch Preserve. Accessed online February 13 at http://www.sdcounty.ca.gov/parks/openspace/Otay_Ranch.html.

2007 Draft Otay Ranch Long-Term Implementation Program Public Review. Accessed February 11 at http://www.sdcounty.ca.gov/dplu/docs/LongTerm_IP_Cover_Letter_and_Document_12_31_07.pdf.

2002 Otay Ranch Phase 2 Resource Management Plan. Originally published June 1996. Revised August.

1993 Otay Ranch Phase 1 Resource Management Plan.

U.S. Fish and Wildlife Service (USFWS)

1997 Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol.

ATTACHMENTS

ATTACHMENT 1

TABLE 1
RECONNAISSANCE SITE VISITS & FOCUSED SURVEYS AT
OTAY RANCH PRESERVE – SALT CREEK

Date	Field Personnel	Task
October 16, 2009	M. Dodero, A. Bennett	Reconnaissance Site Visit
October 29, 2010	M. Dodero, A. Bennett	Invasive Plant Survey
December 17, 2009	M. Dodero, A. Bennett	Reconnaissance Site Visit
January 11, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
February 9, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
March 17, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
March 31, 2010	M. Dodero, A. Bennett	Establish Site Photo Monitoring Points
April 2, 2010	M. Dodero, A. Bennett	Establish QCB & Site Photo Monitoring Points
April 6, 2010	E. Procsal, E. McKinney, A. Bennett, J. Bates	CAGN Protocol Survey
April 13, 2010	E. Procsal, E. McKinney, A. Bennett, P. Dolan	CAGN Protocol Survey
April 16, 2010	M. Dodero, A. Bennett	Rare Plant Survey
April 19, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
April 19, 2010	J. Lovio, E. Procsal	Avian Point Count
April 23, 2010	E. Procsal, E. McKinney	Avian Point Count
April 26, 2010	E. Procsal, E. McKinney, P. Dolan, B. Ogg	CAGN Protocol Survey
April 30, 2010	E. Procsal, E. McKinney, A. Bennett, P. Dolan	CAGN Protocol Survey
May 3, 2010	E. Procsal, E. McKinney, A. Bennett, P. Dolan	CAGN Protocol Survey
May 5, 2010	E. Procsal, A. Bennett	CACW Presence/Absence Survey
May 11, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
May 17, 2010	J. Lovio, E. Procsal	Avian Point Count
May 19, 2010	J. Lovio, E. Procsal	Avian Point Count
May 28, 2010	E. Procsal, R. Atik	CACW Presence/Absence Survey
June 2, 2010	E. Procsal, E. McKinney, A. Bennett, J. Bates	CAGN Protocol Survey
June 4, 2010	M. Dodero, A. Bennett	Rare Plant Survey
June 8, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit & Rare Plant Survey
June 9, 2010	E. Procsal, A. Bennett	CACW Presence/Absence Survey
June 14, 2010	J. Lovio, E. Procsal	Avian Point Count
June 22, 2010	M. Dodero, A. Bennett	Invasive Plant Survey
June 23, 2010	J. Lovio, E. Procsal	Avian Point Count
June 24, 2010	M. Dodero, A. Bennett & RECON crew	Invasive Plant Survey and Treatment
June 28, 2010	M. Dodero, A. Bennett	Rare Plant Survey

TABLE 2
COASTAL CALIFORNIA GNATCATCHER
PROTOCOL SURVEY EFFORT AND CONDITIONS - SALT CREEK

Date	Survey Site	Subarea	Surveyors	Beginning Conditions ¹	Ending Conditions ¹	Acres per Hour/ Team
4/6/10	Salt Creek	2, 4.5* / 1, 3.5*	B. Procsal, A. Bennett/ E. McKinney, J. Bates	6:30 A.M.; 44°F; 0 mph; 0% cover	12:00 P.M.; 77°F; 0 mph; 0% cover	12.0 / 11.9
4/13/10	Salt Creek	4.5*, 5 / 3.5*, 6	B. Procsal, P. Dolan/ E. McKinney, A. Bennett	6:45 A.M.; 49° F, wind 0-1 mph; 40% cover	12:00 P.M.; 70° F, wind 0-4 mph; 70% cover	13.2 / 13.6
4/26/10	Salt Creek	2, 4 / 1, 3	B. Procsal, P. Dolan/ E. McKinney, B. Ogg	6:00 A.M.; 56°F; 0 mph; 100% cover	12:00 P.M.; 74°F; 0-4 mph; 0% cover	15.0 / 14.7
4/30/10	Salt Creek	5 / 6	B. Procsal, P. Dolan/ E. McKinney, A. Bennett	6:00 A.M.; 48°F; 0-1 mph; 15% cover	12:00 P.M.; 70°F; 0-1 mph; 30% cover	7.5 / 8.0
5/3/10	Salt Creek	2, 4 / 1, 3	B. Procsal, P. Dolan/ E. McKinney, A. Bennett	6:00 A.M.; 62° F, wind 0-1 mph; 0% cover	12:00 P.M.; 78° F, wind 2-6 mph; 0% cover	15.0 / 14.7
6/2/10	Salt Creek	6 / 5	B. Procsal, A. Bennett/ E. McKinney, J. Bates	6:00 A.M.; 58°F; 0-2 mph; 98% cover	11:50 A.M.; 76°F; 1-4 mph; 10% cover	8.0 / 7.5

* = Half of Subarea was completed; ¹ Times are in Daylight Savings Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent

TABLE 3
COASTAL CACTUS WREN
NEST SURVEY EFFORT AND CONDITIONS AT OTAY RANCH PRESERVE – SALT CREEK

Date	Survey Site	Subarea	Surveyors	Beginning Conditions ¹	Ending Conditions ¹
5/5/10	Salt Creek	1,2, 5*	B. Procsal, A. Bennett	8:30 A.M.; 73°F; 0-1 mph; 0% cover	2:30 P.M.; 72°F; 1-4 mph; 0% cover
5/28/10	Salt Creek	3, 4, 5*	B. Procsal, R. Atik	9:00 A.M.; 69° F, wind 0-1 mph; 40% cover	3:00 P.M.; 73° F, wind 0-4 mph; 0% cover
6/9/10	Salt Creek	6	B. Procsal, A. Bennett	6:30 A.M.; 64°F; 0-1 mph; 15% cover	10:00 A.M.; 70°F; 0-1 mph; 30% cover

* = Half of Subarea was completed; ¹ Times are in Daylight Savings Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent

TABLE 4
AVIAN POINT COUNT SURVEY EFFORT AND CONDITIONS AT OTAY RANCH - SALT CREEK

Date	Survey Site	Type of Survey	Surveyors	Beginning Conditions ¹	Ending Conditions ¹
4/19/10	SC	N	B. Procsal, J. Lovio	10:49 P.M.; 58°F; wind 0 mph; 0% cc	1:50 A.M.; 49°F; wind 0-2 mph; 0% cc
4/23/10	SC	D	B. Procsal, E. McKinney	6:45 A.M.; 47° F, wind 2-5 mph; 0% cc	9:50 A.M.; 62° F, wind 0-1 mph; 0% cc
5/17/10	SC	D	B. Procsal, J. Lovio	9:27 A.M.; 54°F; wind 0-1 mph; 100% cc	12:02 P.M.; 63°F; wind 0-4 mph; 100% cc
5/19/10	SC	N	B. Procsal, J. Lovio	8:17 P.M.; 60° F, wind 0 mph; 0% cc	10:28 P.M.; 53° F, wind 0 mph; 0% cc
6/14/10	SC	N	B. Procsal, J. Lovio	8:30 P.M.; 61° F, wind 2 mph; 0% cc	10:34 A.M.; 58° F, wind 0-1 mph; 0% cc
6/23/10	SC	D	B. Procsal, J. Lovio	6:35 A.M.; 58° F, wind 0-1 mph; 100% cc	8:33 A.M.; 76° F, wind 1-3 mph; 0% cc

D= Diurnal survey, N = Nocturnal survey.

¹ Times are in Daylight Savings Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent; cc= cloud cover

TABLE 5
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH – SALT CREEK

Scientific Name	Common Name	Origin
LYCOPODS		
SELAGINELLACEAE	SPIKE-MOSS FAMILY	
<i>Selaginella cinerascens</i> A.A. Eaton	ashy spike-moss	N
PTERIDACEAE	BRAKE FAMILY	
<i>Pellaea mucronata</i> (D.C. Eaton) D.C. Eaton	bird's-foot fern	N
FERNS		
AIZOACEAE	FIG-MARIGOLD FAMILY	
<i>Mesembryanthemum crystallinum</i> L.	crystalline ice plant	I
<i>Sesuvium verrucosum</i> Raf.	western sea-purslane	N
AMARANTHACEAE	AMARANTH FAMILY	
<i>Chenopodium murale</i> L.	nettle-leaved goosefoot	I
APIACEAE (UMBELLIFERAE)	CARROT FAMILY	
<i>Apiastrum angustifolium</i> Nutt.	wild-celery	N
ASTERACEAE	SUNFLOWER FAMILY	
<i>Ambrosia [=Hymenoclea] monogyra</i> (A. Gray) Strother & B.G. Baldwin	desert fragrance	N
<i>Anthemis cotula</i> L.	mayweed	I
<i>Carduus pycnocephalus</i> L.	Italian thistle	I
<i>Conyza canadensis</i> (L.) Cronquist	horseweed	N
<i>Dittrichia graveolens</i> (L.) Greuter	stinkwort	I
<i>Hazardia squarrosa</i> (Hook. & Arn.) Greene	saw-toothed goldenbush	N
<i>Heterotheca grandiflora</i> Nutt.	telegraph weed	N
<i>Isocoma menziesii</i> (Hook. & Arn.) G.L. Nesom var. <i>decumbens</i>	decumbent goldenbush	N
<i>Isocoma menziesii</i> (Hook. & Arn.) G.L. Nesom var. <i>vernonioides</i> (Nutt.) G.L. Nesom	coast goldenbush	N
<i>Lactuca serriola</i> L.	prickly lettuce	I
<i>Lasthenia gracilis</i> (DC.) E. Greene	common goldenfields	N
<i>Pluchea odorata</i> (L.) Cass.	salt marsh fleabane	N
<i>Psilocarphus brevissimus</i> Nutt. var. <i>brevissimus</i>	dwarf woolly-heads	N
<i>Psilocarphus tenellus</i> Nutt.	woolly-heads	N
<i>Stephanomeria</i> sp.	wreath-plant	N
<i>Xanthium strumarium</i> L.	cocklebur	N

TABLE 5
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH – SALT CREEK
(continued)

Scientific Name	Common Name	Origin
BORAGINACEAE	BORAGE FAMILY	
<i>Harpagonella palmeri</i> A. Gray	Palmer's grapplinghook	N
CACTACEAE	CACTUS FAMILY	
<i>Cylindropuntia californica</i> [= <i>Opuntia parryi</i>] (Torr. & A. Gray) F.M. Knuth	snake cholla	N
CONVOLVULACEAE	MORNING-GLORY FAMILY	
<i>Cuscuta</i> sp.	dodder	N
CRASSULACEAE	STONECROP FAMILY	
<i>Dudleya variegata</i> (S. Watson) Moran	variegated dudleya	N
FABACEAE (LEGUMINOSAE)	LEGUME FAMILY	
<i>Lotus scoparius</i> (Nutt.) Ottley	California broom	N
<i>Trifolium hirtum</i> All.	rose clover	I
FAGACEAE	OAK FAMILY	
<i>Quercus dumosa</i> Nutt.	Nuttall's scrub oak	N
GENTIANACEAE	GENTIAN FAMILY	
<i>Zeltnera exaltatum</i> (Griseb.) G. Mans.	centaury	N
LAMIACEAE	MINT FAMILY	
<i>Salvia columbariae</i> Benth.	chia	N
<i>Salvia munzii</i> Epling	Munz's sage	N
<i>Trichostema lanceolatum</i> Benth.	vinegar weed	N
LYTHRACEAE	LOOSESTRIFE FAMILY	
<i>Ammannia robusta</i> Heer & Regel	grand redstem	N
MYOPORACEAE	MYOPORUM FAMILY	
<i>Myoporum parvifolium</i> R. Br.	creeping myoporum	I
ONAGRACEAE	EVENING-PRIMROSE FAMILY	
<i>Epilobium canum</i> (Greene) P.H. Raven	California fuchsia, zauschneria	N
PHRYMACEAE [=SCROPHULARIACEAE]	HOPSEED FAMILY	
<i>Mimulus brevipes</i> Benth.	hillside monkey-flower	N
POLEMONIACEAE	PHLOX FAMILY	
<i>Linanthus dianthiflorus</i> (Benth.) Greene	farinose ground pink	N
<i>Navarretia</i> sp.		

TABLE 5
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH – SALT CREEK
(continued)

Scientific Name	Common Name	Origin
PLANTAGINACEAE	PLANTAIN FAMILY	
<i>Plantago elongata</i> Pursh	prairie plantain	N
RHAMNACEAE	BUCKTHORN FAMILY	
<i>Ceanothus otayensis</i> McMinn.	Otay-lilac	N
<i>Ceanothus tomentosus</i> Parry	coast blue lilac	N
SAXIFRAGACEAE	SAXIFRAGE FAMILY	
<i>Jepsonia parryi</i> (Torr.) Small	mesa saxifrage	N
VERBENACEAE	VERVAIN FAMILY	
<i>Phyla</i> sp.	frog fruit	N
VIOLACEAE	VIOLET FAMILY	
<i>Viola pedunculata</i> Torr. & A. Gray	johnny-jump-up	N
ANGIOSPERMS: MONOCOTS		
ALISMATACEAE	WATER-PLANTAIN FAMILY	
<i>Echinodorus berteroi</i> (Spreng.) Fassett	burhead	N
ARECACEAE	PALM FAMILY	
<i>Phoenix</i> sp.	date palm	I
JUNCACEAE	RUSH FAMILY	
<i>Juncus bufonius</i> L.	toad rush	N
POACEAE (GRAMINEAE)	GRASS FAMILY	
<i>Deschampsia</i> sp.	hairgrass	N
<i>Gastridium ventricosum</i> (Gouan) Schinz & Thell.	nit grass	I
<i>Muhlenbergia microsperma</i> (DC.) Kunth	littleseed muhly	N
<i>Phalaris</i> sp.	canary grass	I
<i>Piptatherum [=Oryzopsis] miliaceum</i> (L.) Coss.	smilo grass	I
THEMIDACEAE	BRODIAEA FAMILY	
<i>Brodiaea terrestris</i> Kellogg ssp. <i>Kernensis</i> (Hoover) T. Niehaus	dwarf brodiaea	N
<i>Muilla clevelandii</i> (S. Watson) Hoover	San Diego goldenstar	N

TABLE 5
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH – SALT CREEK
(continued)

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

ORIGIN

N = Native to locality

I = Introduced species from outside locality

TABLE 6
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SALT CREEK

Scientific Name	Common Name
INVERTEBRATES	
PIERIDAE <i>Anthocharis sara</i> <i>Pieris rapae</i>	WHITES & SULPHURS Sara or Pacific orangetip cabbage white
RIODINIDAE <i>Apodemia virgulti</i>	METALMARKS Behr's metalmark
NYMPHALIDAE <i>Junonia coenia</i> <i>Phyciodes mylitta</i> <i>Vanessa cardui</i>	BRUSH-FOOTED BUTTERFLIES common buckeye mylitta crescent painted lady
AMPHIBIANS	
RANIDAE <i>Rana catesbeiana</i>	TRUE FROGS American bullfrog
REPTILES	
IGUANIDAE <i>Uta stansburiana</i>	IGUANID LIZARDS common side-blotched lizard
TEIIDAE <i>Aspidoscelis hyperythra beldingi</i>	WHIPTAIL LIZARDS Belding's orange-throated whiptail
COLUBRIDAE <i>Pituophis catenifer annectens</i>	COLUBRID SNAKES San Diego gophersnake
BIRDS	
ANATIDAE <i>Anas platyrhynchos platyrhynchos</i>	DUCKS, GEESE, & SWANS mallard
ODONTOPHORIDAE <i>Callipepla californica californica</i>	NEW WORLD QUAIL California quail
ACCIPITRIDAE <i>Buteo jamaicensis</i> <i>Circus cyaneus hudsonius</i>	HAWKS, KITES, & EAGLES red-tailed hawk northern harrier
FALCONIDAE <i>Falco sparverius sparverius</i>	FALCONS & CARACARAS American kestrel
RALLIDAE <i>Fulica americana americana</i>	RAILS, GALLINULES, & COOTS American coot
CHARADRIIDAE <i>Charadrius vociferus vociferus</i>	LAPWINGS & PLOVERS killdeer
COLUMBIDAE <i>Zenaida macroura marginella</i>	PIGEONS & DOVES mourning dove
CUCULIDAE <i>Geococcyx californianus</i>	CUCKOOS & ROADRUNNERS greater roadrunner
TYTONIDAE <i>Tyto alba pratincola</i>	BARN OWLS common barn owl

TABLE 6
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name
STRIGIDAE <i>Bubo virginianus</i>	TYPICAL OWLS great horned owl
CAPRIMULGIDAE <i>Chordeiles acutipennis texensis</i>	GOATSUCKERS lesser nighthawk
APODIDAE <i>Aeronautes saxatalis</i>	SWIFTS white-throated swift
TROCHILIDAE <i>Calypte anna</i> <i>Calypte costae</i>	HUMMINGBIRDS Anna's hummingbird Costa's hummingbird
PICIDAE <i>Picoides nuttallii</i> <i>Picoides pubescens turati</i>	WOODPECKERS & SAPSUCKERS Nuttall's woodpecker downy woodpecker
TYRANNIDAE <i>Contopus sordidulus</i> <i>Empidonax difficilis</i> <i>Myiarchus cinerascens cinerascens</i> <i>Sayornis nigricans semiatra</i> <i>Tyrannus vociferans vociferans</i>	TYRANT FLYCATCHERS western wood pewee Pacific slope flycatcher ash-throated flycatcher black phoebe Cassin's kingbird
VIREONIDAE <i>Vireo bellii pusillus</i>	VIREOS least Bell's vireo
CORVIDAE <i>Aphelocoma californica</i> <i>Corvus brachyrhynchos hesperis</i> <i>Corvus corax clarionensis</i>	CROWS, JAYS, & MAGPIES western scrub-jay American crow common raven
ALAUDIDAE <i>Eremophila alpestris</i>	LARKS horned lark
HIRUNDINIDAE <i>Hirundo rustica erythrogaster</i> <i>Petrochelidon pyrrhonota tachina</i> <i>Stelgidopteryx serripennis</i> <i>Tachycineta thalassina lepida</i>	SWALLOWS barn swallow cliff swallow northern rough-winged swallow violet-green swallow
AEGITHALIDAE <i>Psaltriparus minimus minimus</i>	BUSHTIT bushtit
TROGLODYTIDAE <i>Campylorhynchus brunneicapillus sandiegensis</i> <i>Thryomanes bewickii</i> <i>Troglodytes aedon parkmanii</i>	WRENS San Diego cactus wren Bewick's wren house wren
SYLVIIDAE <i>Polioptila caerulea</i> <i>Polioptila californica californica</i>	GNATCATCHERS blue-gray gnatcatcher coastal California gnatcatcher
TURDIDAE <i>Sialia mexicana occidentalis</i>	THRUSHES western bluebird
TIMALIIDAE <i>Chamaea fasciata henshawi</i>	BABBLERS wrentit

TABLE 6
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name
MIMIDAE	MOCKINGBIRDS & THRASHERS
<i>Mimus polyglottos polyglottos</i>	northern mockingbird
<i>Toxostoma redivivum redivivum</i>	California thrasher
STURNIDAE	STARLINGS & MYNAS
<i>Sturnus vulgaris</i>	European starling (I)
PARULIDAE	WOOD WARBLERS
<i>Dendroica petechia</i>	yellow warbler
<i>Geothlypis trichas</i>	common yellowthroat
<i>Icteria virens auricollis</i>	yellow-breasted chat
<i>Wilsonia pusilla</i>	Wilson's warbler
THRAUPIDAE	TANAGERS
<i>Piranga ludoviciana</i>	western tanager
EMBERIZIDAE	EMBERIZIDS
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow
<i>Ammodramus savannarum perpallidus</i>	grasshopper sparrow
<i>Amphispiza belli belli</i>	Bell's sage sparrow
<i>Chondestes grammacus strigatus</i>	lark sparrow
<i>Melospiza melodia</i>	song sparrow
<i>Pipilo crissalis</i>	California towhee
<i>Pipilo maculatus</i>	spotted towhee
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
CARDINALIDAE	CARDINALS & GROSBEAKS
<i>Passerina caerulea salicaria</i>	blue grosbeak
<i>Passerina amoena</i>	lazuli bunting
<i>Pheucticus melanocephalus maculatus</i>	black-headed grosbeak
ICTERIDAE	BLACKBIRDS & NEW WORLD ORIOLES
<i>Agelaius phoeniceus</i>	red-winged blackbird
<i>Icterus bullockii</i>	Bullock's oriole
<i>Icterus cucullatus nelsoni</i>	hooded oriole
<i>Molothrus ater</i>	brown-headed cowbird
<i>Sturnella neglecta</i>	western meadowlark
FRINGILLIDAE	FINCHES
<i>Carduelis psaltria hesperophilus</i>	lesser goldfinch
<i>Carduelis tristis salicamans</i>	American goldfinch
<i>Carpodacus mexicanus frontalis</i>	house finch
MAMMALS	
LEPORIDAE	RABBITS & HARES
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit
<i>Sylvilagus bachmani</i>	brush rabbit
SCIURIDAE	SQUIRRELS & CHIPMUNKS
<i>Spermophilus beecheyi</i>	California ground squirrel
MURIDAE	OLD WORLD MICE & RATS
<i>Neotoma sp.</i>	woodrat

TABLE 6
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name
CANIDAE <i>Canis latrans</i>	CANIDS coyote
EQUIDAE <i>Equus caballus</i>	HORSES & ASSES horse (I)
BOVIDAE <i>Bos primigenius</i>	CATTLE cattle (I)

(I) = Introduced species

TABLE 7
SENSITIVE PLANT SPECIES
PREVIOUSLY UNDOCUMENTED OR ADDITIONAL POPULATIONS AT OTAY RANCH PRESERVE – SALT CREEK

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
GYMNOSPERMS					
CUPRESSACEAE	CYPRESS FAMILY				
<i>Hesperocyparis forbesii</i> Tecate cypress	--	1B	MSCP	Evergreen tree; closed-cone coniferous forest, chaparral; Otay Mountain; elevation 700–5,000 feet.	Two additional populations of Tecate cypress were mapped in the southwestern section.
ANGIOSPERMS: DICOTS					
AMARANTHACEAE	AMARANTH FAMILY				
<i>Atriplex pacifica</i> south coast saltbush	--	1B	–	Annual herb; coastal bluff scrub, coastal dunes, coastal sage scrub, playas; blooms Mar.–Oct.; elevation less than 500 feet.	Two additional individuals of south coast saltbush
ASTERACEAE	SUNFLOWER FAMILY				
<i>Holocarpha virgata</i> ssp. <i>elongata</i> graceful tarplant	--	4	–	Annual herb; coastal sage scrub, cismontane woodland, valley and foothill grassland, chaparral; blooms July–Nov.; elevation 200–3,600 feet.	Two points were mapped for graceful tarplant along the southern boundary. Graceful tarplant is common between the two points and numbers in the thousands. Graceful tarplant is a previously undocumented species at Salt Creek.
<i>Isocoma menziesii</i> var. <i>menziesii</i> [=var. <i>decumbens</i>] decumbent goldenbush	--	1B	–	Shrub; chaparral, coastal sage scrub, sandy soils, often in disturbed areas; blooms April–Nov.; elevation less than 500 feet.	Decumbent goldenbush is common throughout the coastal sage scrub at Salt Creek. Individuals number in the hundreds. Decumbent goldenbush is a previously undocumented species at Salt Creek.

TABLE 7
SENSITIVE PLANT SPECIES
PREVIOUSLY UNDOCUMENTED OR ADDITIONAL POPULATIONS AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
BORAGINACEAE					
BORAGE FAMILY					
<i>Harpagonella palmeri</i> Palmer's grapplinghook	--	4	–	Annual herb; chaparral, coastal sage scrub, valley and foothill grassland; clay soils; blooms March–May; elevation less than 2,800 feet. Inconspicuous and easily overlooked.	Thousands of additional individuals of Palmer's grapplinghook were mapped along the western boundary of the site as well as centrally. A population was mapped along the southeastern boundary.
CACTACEAE					
CACTUS FAMILY					
<i>Cylindropuntia californica</i> [= <i>Opuntia californica</i> var. <i>californica</i> , <i>O. parryi</i> var. <i>serpentina</i>] snake cholla	--	1B	NE, MSCP	Succulent shrub; chaparral, coastal sage scrub; blooms April–May; elevation 100–500 feet.	Less than 100 individuals of snake cholla were mapped at Salt Creek. Previously, snake cholla had not been positively confirmed.
CRASSULACEAE					
STONECROP FAMILY					
<i>Dudleya variegata</i> variegated dudleya	--	1B	NE, MSCP	Perennial herb; openings in chaparral, coastal sage scrub, grasslands, vernal pools; blooms May–June; elevation less than 2,000 feet.	Hundreds of additional individuals of variegated dudleya were mapped at approximately nine locations.
FAGACEAE					
OAK FAMILY					
<i>Quercus dumosa</i> Nuttall's scrub oak	--	1B	–	Evergreen shrub; closed-cone coniferous forest, coastal chaparral, coastal sage scrub, sandy and clay loam soils; blooms Feb.–March; elevation less than 1,300 feet.	A stand of Nuttall's scrub oak was mapped along the central eastern boundary. Previously, only scrub oak (<i>Quercus berberidifolia</i>) had been identified; Nuttall's scrub oak is a previously undocumented species at Salt Creek.

TABLE 7
SENSITIVE PLANT SPECIES
PREVIOUSLY UNDOCUMENTED OR ADDITIONAL POPULATIONS AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
LAMIACEAE					
					MINT FAMILY
<i>Salvia munzii</i> Munz's sage	–/–	2	–	Evergreen shrub; chaparral, coastal sage scrub, blooms Feb.–April; elevation less than 3,500 feet.	Five locations of Munz's sage were mapped. Munz's sage is a previously undocumented species at Salt Creek.
RHAMNACEAE					
					BUCKTHORN FAMILY
<i>Ceanothus otayensis</i> Otay Mountain ceanothus	–/–	1B	–	Evergreen shrub; chaparral, metavolcanic or gabbroic; blooms Jan.–April; elevation 2,000–3,600 feet. Known only from the San Miguel and Otay Mountains.	One individual of Otay Mountain ceanothus was observed along the northern edge of the Tecate cypress stand along the southern boundary. It is presumed that this individual was planted, along with the Tecate cypress, along a pipeline. Otay Mountain ceanothus is a previously undocumented species at Salt Creek.
ANGIOSPERMS: MONOCOTS					
THEMIDACEAE					
<i>Mulla clevelandii</i> San Diego goldenstar	–/–	1B	MSCP	Perennial herb (bulbiferous); chaparral, coastal sage scrub, valley and foothill grassland, vernal pools, clay soils; blooms May; elevation 170–1,500 feet.	Thousands of individuals of San Diego goldenstar were mapped along the southeastern boundary. San Diego goldenstar is a previously undocumented species at Salt Creek.

TABLE 7
SENSITIVE PLANT SPECIES
PREVIOUSLY UNDOCUMENTED OR ADDITIONAL POPULATIONS AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

CALIFORNIA NATIVE PLANT SOCIETY LISTS

1A = Species presumed extinct.

1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.

4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

CITY OF CHULA VISTA

NE = Narrow endemic

MSCP = Multiple Species Conservation Program covered species

TABLE 8
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT THE OTAY RANCH PRESERVE – SALT CREEK

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
BIRDS (Nomenclature from American Ornithologists' Union 1998 and Unitt 2004)				
ANATIDAE	DUCKS, GEESE, & SWANS			
<i>Anas platyrhynchos platyrhynchos</i>	mallard	OW	C / Y	O
ODONTOPHORIDAE	NEW WORLD QUAIL			
<i>Callipepla californica californica</i>	California quail	CSS	C / Y	O, V
ACCIPITRIDAE	HAWKS, KITES, & EAGLES			
<i>Buteo jamaicensis</i>	red-tailed hawk	F	C / Y	O
<i>Circus cyaneus hudsonius</i>	northern harrier	F	F / Y	O
FALCONIDAE	FALCONS & CARACARAS			
<i>Falco sparverius sparverius</i>	American kestrel	F	C / Y	O
RALLIDAE	RAILS, GALLINULES, & COOTS			
<i>Fulica americana americana</i>	American coot	OW	C / W	O
CHARADRIIDAE	LAPWINGS & PLOVERS			
<i>Charadrius vociferus vociferus</i>	killdeer	FM	C / Y	O, V
COLUMBIDAE	PIGEONS & DOVES			
<i>Zenaidura macroura marginella</i>	mourning dove	CSS	C / Y	O, V
CUCULIDAE	CUCKOOS & ROADRUNNERS			
<i>Geococcyx californianus</i>	greater roadrunner	CSS	F / Y	O
TYTONIDAE	BARN OWLS			
<i>Tyto alba pratincola</i>	common barn owl	F	F / Y	O
STRIGIDAE	TYPICAL OWLS			
<i>Bubo virginianus</i>	great horned owl		F / Y	O
CAPRIMULGIDAE	GOATSUCKERS			
<i>Chordeiles acutipennis texensis</i>	lesser nighthawk	CSS	F / S	O

TABLE 8
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT THE OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
APODIDAE	SWIFTS			
<i>Aeronautes saxatalis</i>	white-throated swift	F	C / Y	O, V
TROCHILIDAE	HUMMINGBIRDS			
<i>Calypte anna</i>	Anna's hummingbird	CSS	C / Y	O, V
<i>Calypte costae</i>	Costa's hummingbird	CSS	F / S	O, V
PICIDAE	WOODPECKERS & SAPSUCKERS			
<i>Picoides nuttallii</i>	Nuttall's woodpecker	RW	C / Y	O, V
<i>Picoides pubescens turati</i>	downy woodpecker	RW	F / Y	O, V
TYRANNIDAE	TYRANT FLYCATCHERS			
<i>Contopus sordidulus</i>	western wood-pewee	RW	F / S	O, V
<i>Empidonax difficilis</i>	Pacific slope flycatcher	RW	C / S	O, V
<i>Myiarchus cinerascens cinerascens</i>	ash-throated flycatcher	CSS	C / S	O, V
<i>Sayornis nigricans semiatra</i>	black phoebe	CSS	C / Y	O, V
<i>Tyrannus vociferans vociferans</i>	Cassin's kingbird	CSS	C / Y	O, V
VIREONIDAE	VIREOS			
<i>Vireo bellii pusillus</i>	least Bell's vireo	RW	F / S	O, V
CORVIDAE	CROWS, JAYS, & MAGPIES			
<i>Aphelocoma californica</i>	western scrub-jay	CSS	C / Y	O, V
<i>Corvus brachyrhynchos hesperis</i>	American crow	F	C / Y	O, V
<i>Corvus corax clarionensis</i>	common raven	F	C / Y	O, V
ALAUDIDAE	LARKS			
<i>Eremophila alpestris</i>	horned lark	CSS	C / Y	O, V
HIRUNDINIDAE	SWALLOWS			
<i>Hirundo rustica erythrogaster</i>	barn swallow	F	U / M	O
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow	F	C / S	O, V
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow	F	C / S	O, V
<i>Tachycineta thalassina lepida</i>	violet-green swallow	F	F / M	O

TABLE 8
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT THE OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
AEGITHALIDAE	BUSHTIT			
<i>Psaltriparus minimus minimus</i>	bushtit	CSS	C / Y	O, V
TROGLODYTIDAE	WRENS			
<i>Campylorhynchus brunneicapillus sandiegensis</i>	San Diego cactus wren	CSS	F / Y	O, V
<i>Thryomanes bewickii</i>	Bewick's wren	CSS	C / Y	O, V
<i>Troglodytes aedon parkmanii</i>	house wren	CSS, RW	C / Y	O, V
SYLVIIDAE	GNATCATCHERS			
<i>Polioptila caerulea</i>	blue-gray gnatcatcher	CSS	F / Y	O
<i>Polioptila californica californica</i>	coastal California gnatcatcher	CSS	C / Y	O, V
TURDIDAE	THRUSHES			
<i>Sialia mexicana occidentalis</i>	western bluebird	CSS, RW	F / W	O
TIMALIIDAE	BABLERS			
<i>Chamaea fasciata henshawi</i>	wrentit	CSS	C / Y	O, V
MIMIDAE	MOCKINGBIRDS & THRASHERS			
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	CSS, RW	C / Y	O, V
<i>Toxostoma redivivum redivivum</i>	California thrasher	CSS	F / Y	O, V
STURNIDAE	STARLINGS & MYNAS			
<i>Sturnus vulgaris</i>	European starling (I)	CSS, RW	C / Y	O, V
PARULIDAE	WOOD WARBLERS			
<i>Dendroica petechia</i>	yellow warbler	RW	C / S	O, V
<i>Geothlypis trichas</i>	common yellowthroat	RW	C / Y	O, V
<i>Icteria virens auricollis</i>	yellow-breasted chat	RW	C / Y	O, V
<i>Wilsonia pusilla</i>	Wilson's warbler	RW	U / M	O
THRAUPIDAE	TANAGERS			
<i>Piranga ludoviciana</i>	western tanager	CSS	U / M	O

TABLE 8
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT THE OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
EMBERIZIDAE		EMBERIZIDS		
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	CSS	C / Y	O, V
<i>Amphispiza belli belli</i>	Bell's sage sparrow	CSS	F / Y	O, V
<i>Chondestes grammacus strigatus</i>	lark sparrow	CSS	F / Y	O, V
<i>Melospiza melodia</i>	song sparrow	CSS	C / Y	O, V
<i>Pipilo crissalis</i>	California towhee	CSS	C / Y	O, V
<i>Pipilo maculatus</i>	spotted towhee	CSS, RW	C / Y	O, V
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	CSS	C / W	O, V
CARDINALIDAE		CARDINALS & GROSBEAKS		
<i>Passerina caerulea salicaria</i>	blue grosbeak	RW	F / S	O, V
<i>Passerina amoena</i>	lazuli bunting	CSS	F / C	O, V
<i>Pheucticus melanocephalus maculatus</i>	black-headed grosbeak	RW	C / S	O, V
ICTERIDAE		BLACKBIRDS & NEW WORLD ORIOLES		
<i>Agelaius phoeniceus</i>	red-winged blackbird	FM	C / Y	O, V
<i>Icterus bullockii</i>	Bullock's oriole	RW	F / S	O, V
<i>Icterus cucullatus nelsoni</i>	hooded oriole	RW	F / S	O, V
<i>Molothrus ater</i>	brown-headed cowbird	RW	F / Y	O, V
<i>Sturnella neglecta</i>	western meadowlark	CSS	F / Y	O, V
FRINGILLIDAE		FINCHES		
<i>Carduelis psaltria hesperophilus</i>	lesser goldfinch	CSS	C / Y	O, V
<i>Carduelis tristis salicamans</i>	American goldfinch	CSS	C / Y	O, V
<i>Carpodacus mexicanus frontalis</i>	house finch	CSS	C / Y	O, V

(I) = Introduced species

TABLE 8
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT THE OTAY RANCH PRESERVE – SALT CREEK
(continued)

HABITATS

CSS = Coastal sage scrub, inland sage scrub
F = Flying overhead
FM = Freshwater marsh
OW = Open water (reservoirs, ponds, streams, lakes)
RW = Riparian woodlands
CMC = Coastal mixed, mixed, or chamise chaparral

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)

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

EVIDENCE OF OCCURRENCE

O = Observed
V = Vocalization

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
Point Count Location #1 – Coastal Sage Scrub and Maritime Succulent Scrub								
Point Count Survey Conducted During these Times		6:45A- 6:55A	9:27A- 9:37A	8:32A- 8:42A	10:49P- 10:59P	10:18P- 10:28P	8:30P- 8:40P	
ODONTOPHORIDAE <i>Callipepla californica californica</i>	NEW WORLD QUAIL California quail	-	1	-	-	-	-	Y
TYRANNIDAE <i>Sayornis nigricans semiatra</i>	TYRANT FLYCATCHERS black phoebe	-	1	-	-	-	-	Y
HIRUNDINIDAE <i>Petrochelidon pyrrhonota tachina</i>	SWALLOWS cliff swallow	-	-	3	-	-	-	S
EMBERIZIDAE <i>Amphispiza belli belli</i>	EMBERIZIDS Bell's sage sparrow	-	2	-	-	-	-	Y
<i>Pipilo crissalis</i>	California towhee	1	-	-	-	-	-	Y
Point Count Location #2 – Coastal Sage Scrub								
Point Count Survey Conducted During these Times		7:04A- 7:14A	9:47A- 9:57A	8:11A- 8:21A	11:13P- 11:23P	9:56P- 10:06P	8:50P- 9:00P	
CORVIDAE <i>Corvus corax clarionensis</i>	CROWS, JAYS, & MAGPIES common raven	3	-	-	-	-	-	Y
ALAUDIDAE <i>Eremophila alpestris</i>	LARKS horned lark	2	-	-	-	-	-	Y

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
Point Count Location #3 – Coastal Sage Scrub Habitat, Disturbed Coastal Sage Scrub, and Mulefat Scrub								
Point Count Survey Conducted During these Times		7:23A- 7:33A	10:06A- 10:16A	7:46A- 7:56A	11:40P- 11:50P	8:41P- 8:51P	9:12P- 9:22P	
ODONTOPHORIDAE	NEW WORLD QUAIL							
<i>Callipepla californica californica</i>	California quail	-	-	1	-	-	-	Y
ACCIPITRIDAE	HAWKS, KITES, & EAGLES							
<i>Buteo jamaicensis</i>	red-tailed hawk	-	1	-	-	-	-	Y
APODIDAE	SWIFTS							
<i>Aeronautes saxatalis</i>	white-throated swift	-	3	-	-	-	-	Y
CORVIDAE	CROWS, JAYS, & MAGPIES							
<i>Corvus corax clarionensis</i>	common raven	1	-	-	-	-	-	Y
HIRUNDINIDAE	SWALLOWS							
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow	-	20	2	-	-	-	S
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow	4						S
TROGLODYTIDAE	WRENS							
<i>Thryomanes bewickii</i>	Bewick's wren	2	-	-	-	-	-	Y
PARULIDAE	WOOD WARBLERS							
<i>Geothlypis trichas</i>	common yellowthroat	-	-	1	-	-	-	Y
<i>Icteria virens auricollis</i>	yellow-breasted chat	-	1	-	-	-	-	Y
EMBERIZIDAE	EMBERIZIDS							
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	-	-	1	-	-	-	Y
<i>Ammodramus savannarum perpallidus</i>	grasshopper sparrow	-	-	1	-	-	-	Y
<i>Melospiza melodia</i>	song sparrow	-	2	-	-	-	-	Y

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
<i>Pipilo crissalis</i>	California towhee	-	1	-	-	-	-	Y
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	1	-	-	-	-	-	W
CARDINALIDAE	CARDINALS & GROSBEAKS							
<i>Passerina caerulea salicaria</i>	blue grosbeak	-	-	2	-	-	-	S
FRINGILLIDAE	FINCHES							
<i>Carduelis tristis salicamans</i>	American goldfinch	-	-	2	-	-	-	Y
Point Count Location #4 –Southern Willow Scrub, Coastal Sage Scrub, Disturbed Coastal Sage Scrub, Annual Grassland/Disturbed Coastal Sage Scrub								
Point Count Survey Conducted During these Times		8:11A- 8:21A	10:33A- 10:43A	7:26A- 7:36A	12:20A- 12:30A	8:17P- 8:27P	9:33P- 9:43P	
ODONTOPHORIDAE	NEW WORLD QUAIL							
<i>Callipepla californica californica</i>	California quail	-	-	1	-	-	-	Y
TYTONIDAE	BARN OWLS							
<i>Tyto alba pratincola</i>	common barn owl	-	-	-	-	-	1	Y
PICIDAE	WOODPECKERS & SAPSUCKERS							
<i>Picoides nuttallii</i>	Nuttall's woodpecker	1	1	-	-	-	-	Y
TYRANNIDAE	TYRANT FLYCATCHERS							
<i>Empidonax difficilis</i>	Pacific slope flycatcher	1	1	-	-	-	-	S
<i>Myiarchus cinerascens cinerascens</i>	ash-throated flycatcher	-	1	-	-	-	-	S
<i>Sayornis nigricans semiatra</i>	black phoebe	-	-	1	-	-	-	Y
HIRUNDINIDAE	SWALLOWS							
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow	-	7	-	-	-	-	S

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
AEGITHALIDAE <i>Psaltriparus minimus minimus</i>	BUSHTIT bushtit	-	4	-	-	-	-	Y
TROGLODYTIDAE <i>Thryomanes bewickii</i>	WRENS Bewick's wren	3	-	-	-	-	-	Y
MIMIDAE <i>Mimus polyglottos polyglottos</i>	MOCKINGBIRDS & THRASHERS northern mockingbird	-	1	-	-	-	-	Y
PARULIDAE <i>Dendroica petechia</i>	WOOD WARBLERS yellow warbler	-	1	-	-	-	-	S
<i>Geothlypis trichas</i>	common yellowthroat	1	2	2	-	-	-	Y
<i>Wilsonia pusilla</i>	Wilson's warbler	-	1	-	-	-	-	M
EMBERIZIDAE <i>Aimophila ruficeps canescens</i>	EMBERIZIDS southern California rufous-crowned sparrow	1	-	-	-	-	-	Y
<i>Melospiza melodia</i>	song sparrow	2	2	1	-	-	-	Y
<i>Pipilo crissalis</i>	California towhee		-	2	-	-	-	Y
<i>Pipilo maculatus</i>	spotted towhee	1	-		-	-	-	Y
CARDINALIDAE <i>Passerina amoena</i>	CARDINALS & GROSBEAKS lazuli bunting	1	-	-	-	-	-	S
<i>Pheucticus melanocephalus maculatus</i>	black-headed grosbeak	1	-	-	-	-	-	S
FRINGILLIDAE <i>Carpodacus mexicanus frontalis</i>	FINCHES house finch	-	-	2	-	-	-	Y

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
Point Count Location #5 – Coastal Sage Scrub Habitat and Mulefat Scrub								
	Point Count Survey Conducted During these Times	9:17A- 9:27A	11:22A- 11:32A	6:54A- 7:04A	1:13A- 1:23A	9:10P- 9:20P	10:03P- 10:13P	
ODONTOPHORIDAE	NEW WORLD QUAIL							
<i>Callipepla californica californica</i>	California quail	-	-	3	-	-	-	Y
ACCIPITRIDAE	HAWKS, KITES, & EAGLES							
<i>Buteo jamaicensis</i>	red-tailed hawk	3	-	-	-	-	-	Y
TYTONIDAE	BARN OWLS							
<i>Tyto alba pratincola</i>	common barn owl	-	-	-	-	1	-	Y
HIRUNDINIDAE	SWALLOWS							
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow	-	-	1	-	-	-	S
AEGITHALIDAE	BUSHTIT							
<i>Psaltriparus minimus minimus</i>	bushtit	-	1	2	-	-	-	Y
SYLVIIDAE	GNATCATCHERS							
<i>Polioptila californica californica</i>	coastal California gnatcatcher	2	1	-	-	-	-	Y
MIMIDAE	MOCKINGBIRDS & THRASHERS							
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	3	1	-	-	-	-	Y
PARULIDAE	WOOD WARBLERS							
<i>Icteria virens auricollis</i>	yellow-breasted chat	-	1	-	-	-	-	Y
EMBERIZIDAE	EMBERIZIDS							
<i>Melospiza melodia</i>	song sparrow	1	1	-	-	-	-	Y
<i>Pipilo crissalis</i>	California towhee	2	1	1	-	-	-	Y

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
CARDINALIDAE <i>Passerina amoena</i>	CARDINALS & GROSBEAKS lazuli bunting	1	-	-	-	-	-	S
ICTERIDAE <i>Icterus cucullatus nelsoni</i>	BLACKBIRDS & NEW WORLD ORIOLES hooded oriole	-	1	-	-	-	-	S
FRINGILLIDAE <i>Carduelis psaltria hesperophilus</i> <i>Carpodacus mexicanus frontalis</i>	FINCHES lesser goldfinch house finch	2	3 2	- 4	-	-	-	Y Y
Point Count Location #6 – Coastal Sage Scrub Habitat								
Point Count Survey Conducted During these Times		9:40A- 9:50A	11:52A- 12:02P	6:35A- 6:45A	1:40A- 1:50A	9:32P- 9:42P	10:24P- 10:34P	
CAPRIMULGIDAE <i>Chordeiles acutipennis texensis</i>	GOATSUCKERS lesser nighthawk	-	-	-	1	-	-	S
TROGLODYTIDAE <i>Campylorhynchus brunneicapillus sandiegensis</i>	WRENS San Diego cactus wren	-	-	2	-	-	-	Y
MIMIDAE <i>Mimus polyglottos polyglottos</i> <i>Toxostoma redivivum redivivum</i>	MOCKINGBIRDS & THRASHERS northern mockingbird California thrasher	2	-	-	-	-	-	Y Y
EMBERIZIDAE <i>Pipilo crissalis</i> <i>Zonotrichia leucophrys</i>	EMBERIZIDS California towhee white-crowned sparrow	-	-	1	-	-	-	Y W
ICTERIDAE <i>Icterus cucullatus nelsoni</i>	BLACKBIRDS & NEW WORLD ORIOLES hooded oriole	-	-	1	-	-	-	S

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
FRINGILLIDAE <i>Carduelis psaltria hesperophilus</i>	FINCHES lesser goldfinch	5	-	-	-	-	-	Y

Habitats determined from Dudek 2009

D= Diurnal survey, N = Nocturnal survey. Nomenclature used is from American Ornithologists' Union 1998 and Unitt 2004.

SEASONALITY

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

TABLE 10
SENSITIVE WILDLIFE SPECIES OCCURRING AT OTAY RANCH PRESERVE – SALT CREEK

Species	Status	Habitat	Occurrence/ Comments
REPTILES			
TEIIDAE WHIPTAIL LIZARDS			
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	CSC, MSCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	O
BIRDS			
ACCIPITRIDAE HAWKS, KITES, & EAGLES			
Northern harrier (nesting) <i>Circus cyaneus hudsonius</i>	CSC, MSCP	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.	O
VIREONIDAE VIREOS			
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	FE, SE, MSCP	Willow riparian woodlands. Summer resident.	O, V
TROGLODYTIDAE WRENS			
Coastal cactus wren <i>Campylorhynchus brunneicapillus couesi</i>	CSC, MSCP, *	Maritime succulent scrub, coastal sage scrub with <i>Opuntia</i> thickets. Rare localized resident.	O, V
SYLVIIDAE GNATCATCHERS			
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, CSC, MSCP	Coastal sage scrub, maritime succulent scrub. Resident.	O, V
TURDIDAE THRUSHES			
Western bluebird <i>Sialia mexicana occidentalis</i>	MSCP	Open woodlands, farmlands, orchards.	O

TABLE 10
SENSITIVE WILDLIFE SPECIES OCCURRING AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Species	Status	Habitat	Occurrence/ Comments
PARULIDAE WOOD WARBLERS			
Yellow warbler (nesting) <i>Dendroica petechia</i>	CSC	Breeding restricted to riparian woodland. Spring and fall migrant, localized summer resident, rare winter visitor.	O, V
Yellow-breasted chat (nesting) <i>Icteria virens auricollis</i>	CSC	Dense riparian woodland. Localized summer resident.	O, V
EMBERIZIDAE EMBERIZIDS			
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	CSC, MSCP	Coastal sage scrub, chaparral, grassland. Resident.	O, V
Grasshopper sparrow (nesting) <i>Ammodramus savannarum perpallidus</i>		Tall grass areas. Localized summer resident, rare in winter.	O, V
MAMMALS			
LEPORIDAE RABBITS & HARES			
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	CSC	Open areas of scrub, grasslands, agricultural fields.	O

TABLE 10
SENSITIVE WILDLIFE SPECIES OCCURRING AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

STATUS CODES

Listed/Proposed

- FE = Listed as endangered by the federal government
FT = Listed as threatened by the federal government
SE = Listed as endangered by the state of California

Other

- CSC = California Department of Fish and Game species of special concern
MSCP = Multiple Species Conservation Program covered species
* = Taxa listed with an asterisk fall into one or more of the following categories:
- Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines
 - Taxa that are biologically rare, very restricted in distribution, or declining throughout their range
 - Population(s) in California that may be peripheral to the major portion of a taxon's range but which are threatened with extirpation within California
 - Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands)

EVIDENCE OF OCCURRENCE

- O = Observed
V = Vocalization

ATTACHMENT 2

TABLE 11
RECONNAISSANCE SITE VISITS & SURVEYS AT
OTAY RANCH PRESERVE – SAN YSIDRO

Date	Personnel	Task
October 19, 2009	M. Dodero, A. Bennett	Reconnaissance Site Visit
October 22, 2009	M. Dodero, A. Bennett	Reconnaissance Site Visit
October 29, 2010	M. Dodero, A. Bennett	Invasive Plant Survey
December 17, 2009	M. Dodero, A. Bennett	Reconnaissance Site Visit
January 11, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
February 4, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
March 16, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
April 7, 2010	M. Dodero, A. Bennett	Establish QCB & Site Photo Monitoring Points
April 9, 2010	M. Dodero, A. Bennett	Establish QCB & Site Photo Monitoring Points
April 14, 2010	M. Dodero, A. Bennett	Establish Site Photo Monitoring Points
April 15, 2010	M. Dodero, A. Bennett	Rare Plant Survey
April 19, 2010	J. Lovio, E. Procsal	Avian Point Count
April 27, 2010	E. Procsal, J. Bates	Avian Point Count
May 7, 2010	E. Procsal, A. Bennett	CAGN Protocol Survey
May 15, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
May 17, 2010	J. Lovio, E. Procsal	Avian Point Count
May 17, 2010	E. McKinney, A. Bennett	CAGN Protocol Survey
May 19, 2010	J. Lovio, E. Procsal	Avian Point Count
May 25, 2010	M. Dodero, A. Bennett	Rare Plant Survey
May 27, 2010	E. McKinney, A. Bennett	CAGN Protocol Survey
June 1, 2010	M. Dodero, A. Bennett	Rare Plant Survey
June 21, 2010	J. Lovio, E. Procsal	Avian Point Count
June 22, 2010	M. Dodero, A. Bennett	Invasive Plant Survey
June 23, 2010	J. Lovio, E. Procsal	Avian Point Count

TABLE 12
COASTAL CALIFORNIA GNATCATCHER
PROTOCOL SURVEY EFFORT AND CONDITIONS - SAN YSIDRO

Date	Survey Site	Subarea	Surveyors	Beginning Conditions ¹	Ending Conditions ¹	Acres per Hour/ Team
5/7/10	San Ysidro	-	B. Procsal, A. Bennett	6:00 A.M.; 54°F; 0-1 mph; 0% cover	11:00 A.M.; 73°F; 2-4 mph; 0% cover	12.6
5/17/10	San Ysidro	-	E. McKinney, A. Bennett	7:30 A.M.; 56° F, wind 0-2 mph; 100% cover	12:00 P.M.; 64° F, wind 1-3 mph; 100% cover	14.0
5/27/10	San Ysidro	-	E. McKinney, A. Bennett	6:45 A.M.; 59° F, wind 0-2 mph; 40% cover	9:45 A.M.; 70° F, wind 0-2 mph; 55% cover	14.7

¹ Times are in Daylight Savings Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent

TABLE 13
AVIAN POINT COUNT SURVEY EFFORT AND CONDITIONS AT OTAY RANCH PRESERVE - SAN YSIDRO

Date	Survey Site	Type of Survey	Surveyors	Beginning Conditions ¹	Ending Conditions ¹
4/19/10	SY	N	B. Procsal, J. Lovio	7:44 P.M.; 58°F; wind 0 mph; 0% cc	9:45 P.M.; 49°F; wind 0-2 mph; 0% cc
4/27/10	SY	D	B. Procsal, J. Bates	10:11 A.M.; 64°F; wind 2-4 mph; 30% cc	12:16 P.M.; 59°F; wind 0-4 mph; 30% cc
5/17/10	SY	D	B. Procsal, J. Lovio	6:26 A.M.; 54°F; wind 0-1 mph; 100% cc	8:31 A.M.; 63°F; wind 0-4 mph; 100% cc
5/19/10	SY	N	B. Procsal, J. Lovio	11:20 P.M.; 60° F, wind 0 mph; 0% cc	1:11 A.M.; 53° F, wind 0 mph; 0% cc
6/21/10	SY	N	B. Procsal, J. Lovio	8:32 P.M.; 53°F; wind 0-1 mph; 0% cc	10:25 P.M.; 52°F; wind 0-1 mph; 10% cc
6/23/10	SY	D	B. Procsal, J. Lovio	9:35 A.M.; 58° F, wind 0-1 mph; 100% cc	11:41 A.M.; 76° F, wind 1-3 mph; 0% cc

D= Diurnal survey, N = Nocturnal survey.

¹ Times are in Daylight Savings Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent; cc= cloud cover

TABLE 14
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH - SAN YSIDRO

Scientific Name	Common Name	Origin
ASPLENIACEAE	SPLEENWORT FAMILY	
<i>Asplenium vespertinum</i> Maxon	western spleenwort	N
OPHIOGLOSSACEAE	ADDER'S TONGUE FAMILY	
<i>Ophioglossum californicum</i> Prantl.	California adder's-tongue	N
PTERIDACEAE	BRAKE FAMILY	
<i>Aspidotis californica</i> (Hook.) Copel.	California lace fern	N
APIACEAE (UMBELLIFERAE)	CARROT FAMILY	
<i>Apiastrum angustifolium</i> Nutt.	wild-celery	N
ASTERACEAE	SUNFLOWER FAMILY	
<i>Carduus pycnocephalus</i> L.	Italian thistle	I
<i>Conyza canadensis</i> (L.) Cronquist	horseweed	N
<i>Dittrichia graveolens</i> (L.) Greuter	stinkwort	I
<i>Gutierrezia sarothrae</i> (Pursh) Britton & Rusby	broom snakeweed, matchweed	N
<i>Hedypnois cretica</i> (L.) Dum. Cours.	crete weed	I
<i>Helianthus gracilentus</i> A. Gray	slender sunflower	N
<i>Hypochaeris glabra</i> L.	smooth cat's-ear	I
<i>Isocoma menziesii</i> (Hook & Arn.) G. L. Nesom var. <i>decumbens</i> (Greene) G. L. Nesom	decumbent goldenbush	N
<i>Lasthenia gracilis</i> (DC.) E. Greene	common goldenfields	N
<i>Madia</i> sp.	madia	N
<i>Pentachaeta aurea</i> Nutt.	golden-rayed pentachaeta	N
<i>Solidago velutina</i> DC. ssp. <i>californica</i> (Nutt.) Semple	California goldenrod	N
<i>Sonchus oleraceus</i> L.	common sow thistle	I
<i>Venegasia carpesioides</i> DC.	Jesuit flower	N
BORAGINACEAE	BORAGE FAMILY	
<i>Eucrypta chrysanthemifolia</i> (Benth.) Greene	eucrypta	N
BRASSICACEAE (CRUCIFERAE)	MUSTARD FAMILY	
<i>Cardamine californica</i> (Nutt.) Greene	milk maids, tooth wort	N
<i>Sisymbrium orientale</i> L.	mustard	I
<i>Thysanocarpus laciniatus</i> Torrey & A. Gray	notch fringedpod	N
CONVOLVULACEAE	MORNING-GLORY FAMILY	
<i>Convolvulus simulans</i> L.M. Perry	small-flowered morning glory	N
<i>Dichondra occidentalis</i> House	western dichondra	N

TABLE 14
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH - SAN YSIDRO
(continued)

Scientific Name	Common Name	Origin
CRASSULACEAE	STONECROP FAMILY	
<i>Crassula connata</i> (Ruiz & Pav.) A. Berger	pygmy-weed	N
<i>Dudleya variegata</i> (S. Watson) Moran	variegated dudleya	N
ERICACEAE	HEATH FAMILY	
<i>Comarostaphylis diversifolia</i> (Parry) Greene ssp. <i>diversifolia</i>	summer holly	N
EUPHORBIACEAE	SPURGE FAMILY	
<i>Croton</i> [= <i>Eremocarpus</i>] <i>setigerus</i> Hook.	dove weed	N
<i>Euphorbia peplus</i> L.	petty spurge	I
FABACEAE (LEGUMINOSAE)	LEGUME FAMILY	
<i>Astragalus gambelianus</i> E. Sheldon	Gambel's locoweed	N
<i>Lotus crassifolius</i> (Benth.) Greene var. <i>otayensis</i> Isely	Otay Mountain lotus	N
<i>Lotus hamatus</i> Greene	grab lotus	N
<i>Lotus purshianus</i> Clem. & E.G. Clem. var. <i>purshianus</i>	Spanish clover	N
<i>Lotus scoparius</i> (Torr. & A. Gray) Ottley var. <i>brevialatus</i> Ottley	short-wing deerweed	N
<i>Lotus strigosus</i> (Nutt.) Greene	Bishop's lotus	N
<i>Lupinus bicolor</i> Lindl.	miniature lupine	N
<i>Lupinus concinnus</i> J. Agardh	bajada lupine	N
<i>Medicago polymorpha</i> L.	California burclover	I
<i>Vicia ludoviciana</i> Nutt. var. <i>ludoviciana</i>	deerpea vetch	N
GROSSULARIACEAE	GOOSEBERRY FAMILY	
<i>Ribes indecorum</i> Eastw.	white flowering currant	N
<i>Ribes malvaceum</i> Sm.	chaparral current	N
<i>Ribes speciosum</i> Pursh	fuchsia-flowered gooseberry	N
LAMIACEAE	MINT FAMILY	
<i>Lepechinia ganderi</i> Epling	Gander's pitcher sage	N
<i>Salvia munzii</i> Epling	Munz's sage	N
LYTHRACEAE	LOOSESTRIFE FAMILY	
<i>Lythrum californicum</i> Torr. & A. Gray	California loose-strife	N
<i>Lythrum hyssopifolia</i> L.	grass poly, hyssop loosestrife	I
MYRSINACEAE		
<i>Anagallis arvensis</i> L.	scarlet pimpernel, poor-man's weatherglass	I

TABLE 14
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH - SAN YSIDRO
(continued)

Scientific Name	Common Name	Origin
ONAGRACEAE	EVENING-PRIMROSE FAMILY	
<i>Clarkia epilobioides</i> (Nutt. ex Torr. & A. Gray) A. Nelson & J.F. Macbr.	willow herb clarkia, canyon clarkia	N
OROBANCHACEAE	BROOM-RAPE FAMILY	
<i>Orobanche bulbosa</i> G. Beck	broom-rape	N
PAPAVERACEAE	POPPY FAMILY	
<i>Dendromecon rigida</i> Benth.	bush poppy	N
<i>Ehrendorferia</i> [= <i>Dicentra</i>] <i>chrysantha</i> (Hook. & Arn.) Rylander	golden ear-drops	N
PHRYMACEAE [=SCROPHULARIACEAE]	HOPSEED FAMILY	
<i>Mimulus guttatus</i> DC.	common monkey-flower	N
PLANTAGINACEAE	PLANTAIN FAMILY	
<i>Plantago erecta</i> E. Morris	dot-seed plantain	N
<i>Penstemon spectabilis</i> Thurb. ex A. Gray	violet beard-tongue	N
<i>Stemodia durantifolia</i> (L.) Sw.	blue streamwort	N
POLYGONACEAE	BUCKWHEAT FAMILY	
<i>Rumex salicifolius</i> Weinm.	willow dock	N
RANUNCULACEAE	BUTTERCUP FAMILY	
<i>Thalictrum fendleri</i> Engelm. ex A. Gray	meadow-rue	N
RHAMNACEAE	BUCKTHORN FAMILY	
<i>Ceanothus otayensis</i> McMinn.	Otay-lilac	N
ROSACEAE	ROSE FAMILY	
<i>Potentilla</i> sp.	cinquefoil	N
SAXIFRAGACEAE	SAXIFRAGE FAMILY	
<i>Jepsonia parryi</i> (Torr.) Small	mesa saxifrage	N
SCROPHULARIACEAE	FIGWORT FAMILY	
<i>Cordylanthus rigidus</i> (Benth.) Jeps. ssp. <i>setigerus</i> T.I. Chuang & Heckard	thread-leaved bird's-beak	N
SIMMONDSIACEAE	JOJOBA FAMILY	
<i>Simmondsia chinensis</i> (Link) C.K. Schneid.	jojoba, goat nut	N
SOLANACEAE	NIGHTSHADE FAMILY	
<i>Solanum xanti</i> [= <i>tenuilobatum</i>] A. Gray	chaparral nightshade	N

TABLE 14
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH - SAN YSIDRO
(continued)

Scientific Name	Common Name	Origin
VIOLACEAE	VIOLET FAMILY	
<i>Viola pedunculata</i> Torr. & A. Gray	johnny-jump-up	N
AGAVACEAE	AGAVE FAMILY	
<i>Chlorogalum parviflorum</i> S. Watson	smallflower soap plant	N
CYPERACEAE	SEDGE FAMILY	
<i>Carex spissa</i> L.H. Bailey	San Diego sedge	N
<i>Eleocharis</i> sp.	spike-rush	N
JUNCACEAE	RUSH FAMILY	
<i>Juncus bufonius</i> L.	toad rush	N
LILIACEAE	LILY FAMILY	
<i>Allium praecox</i> Brandegee	common wild onion	N
<i>Fritillaria biflora</i> Lindl.	chocolate lily, mission bells	N
<i>Lilium humboldtii</i> Roetzl & Leichtlin ssp. <i>ocellatum</i> (Kellogg) Thorne	ocellated lily	N
ORCHIDACEAE	ORCHID FAMILY	
<i>Piperia cooperi</i> (S. Watson) Rydb.	chaparral rein-orchid, Cooper's rein orchid	N
POACEAE (GRAMINEAE)	GRASS FAMILY	
<i>Achnatherum diegoense</i> (Swallen) Barkworth	San Diego County needle grass	N
<i>Bothriochloa barbinodis</i> (Lag.) Herter	cane bluestem	N
<i>Bromus sterilis</i> L.	poverty brome	I
<i>Lamarckia aurea</i> (L.) Moench	goldentop	I
<i>Piptatherum [=Oryzopsis] miliaceum</i> (L.) Coss.	smilo grass	I
THEMIDACEAE	BRODIAEA FAMILY	
<i>Bloomeria crocea</i> (Torr.) Coville	common goldenstar	N

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

ORIGIN

N = Native to locality

I = Introduced species from outside locality

TABLE 15
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SAN YSIDRO

Scientific Name	Common Name
REPTILES	
IGUANIDAE	IGUANID LIZARDS
<i>Sceloporus orcutti</i>	granite spiny lizard
<i>Uta stansburiana</i>	common side-blotched lizard
TEIIDAE	WHIPTAIL LIZARDS
<i>Aspidoscelis hyperythra beldingi</i>	Belding's orange-throated whiptail
BOIDAE	BOAS
<i>Lichanura trivirgata roseofusca</i>	coastal rosy boa
CROTALIDAE	RATTLESNAKES
<i>Crotalus ruber</i>	red diamond rattlesnake
<i>Crotalus mitchellii pyrrhus</i>	southwestern speckled rattlesnake
<i>Crotalus viridis helleri</i>	southern Pacific rattlesnake
ODONTOPHORIDAE	NEW WORLD QUAIL
<i>Callipepla californica californica</i>	California quail
CATHARTIDAE	NEW WORLD VULTURES
<i>Cathartes aura</i>	turkey vulture
COLUMBIDAE	PIGEONS & DOVES
<i>Zenaida macroura marginella</i>	mourning dove
TYTONIDAE	BARN OWLS
<i>Tyto alba pratincola</i>	common barn owl
CAPRIMULGIDAE	GOATSUCKERS
<i>Phalaenoptilus nuttallii</i>	common poorwill
APODIDAE	SWIFTS
<i>Aeronautes saxatalis</i>	white-throated swift
TROCHILIDAE	HUMMINGBIRDS
<i>Calypte anna</i>	Anna's hummingbird
<i>Calypte costae</i>	Costa's hummingbird
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Contopus sordidulus</i>	western wood pewee
<i>Myiarchus cinerascens cinerascens</i>	ash-throated flycatcher
<i>Tyrannus vociferans vociferans</i>	Cassin's kingbird
CORVIDAE	CROWS, JAYS, & MAGPIES
<i>Aphelocoma californica</i>	western scrub-jay
<i>Corvus brachyrhynchos hesperis</i>	American crow
<i>Corvus corax clarionensis</i>	common raven
ALAUDIDAE	LARKS
<i>Eremophila alpestris</i>	horned lark
HIRUNDINIDAE	SWALLOWS
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow
AEGITHALIDAE	BUSHTIT
<i>Psaltriparus minimus minimus</i>	bushtit

TABLE 15
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name
TROGLODYTIDAE	WRENS
<i>Salpinctes obsoletus obsoletus</i>	rock wren
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Troglodytes aedon parkmanii</i>	house wren
SYLVIIDAE	GNATCATCHERS
<i>Polioptila californica californica</i>	coastal California gnatcatcher
TURDIDAE	THRUSHES
<i>Sialia mexicana occidentalis</i>	western bluebird
TIMALIIDAE	BABBLERS
<i>Chamaea fasciata henshawi</i>	wrentit
MIMIDAE	MOCKINGBIRDS & THRASHERS
<i>Mimus polyglottos polyglottos</i>	northern mockingbird
<i>Toxostoma redivivum redivivum</i>	California thrasher
PTILOGONATIDAE	SILKY FLYCATCHERS
<i>Phainopepla nitens lepida</i>	phainopepla
PARULIDAE	WOOD WARBLERS
<i>Geothlypis trichas</i>	common yellowthroat
<i>Wilsonia pusilla</i>	Wilson's warbler
EMBERIZIDAE	EMBERIZIDS
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow
<i>Chondestes grammacus strigatus</i>	lark sparrow
<i>Melospiza melodia</i>	song sparrow
<i>Pipilo crissalis</i>	California towhee
<i>Pipilo maculatus</i>	spotted towhee
CARDINALIDAE	CARDINALS & GROSBEAKS
<i>Passerina caerulea salicaria</i>	blue grosbeak
<i>Passerina amoena</i>	lazuli bunting
ICTERIDAE	BLACKBIRDS & NEW WORLD ORIOLES
<i>Sturnella neglecta</i>	western meadowlark
FRINGILLIDAE	FINCHES
<i>Carduelis psaltria hesperophilus</i>	lesser goldfinch
<i>Carpodacus mexicanus frontalis</i>	house finch
MAMMALS	
LEPORIDAE	RABBITS & HARES
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit
MURIDAE	OLD WORLD MICE & RATS (I)
<i>Neotoma sp.</i>	woodrat
CERVIDAE	DEER
<i>Odocoileus hemionus</i>	mule deer

(I) = Introduced species

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
FERNS					
ASPLENIACEAE	SPLEENWORT FAMILY				
<i>Asplenium vespertinum</i> western spleenwort	–/–	4	–	Perennial herb; chaparral, cismontane woodland, coastal sage scrub; rocky habitat; blooms Feb.–June; elevation 500–3,000 feet.	One individual western spleenwort was observed in the southeastern corner of San Ysidro. Western spleenwort is a previously undocumented species at San Ysidro.
OPHIOGLOSSACEAE	ADDER’S TONGUE FAMILY				
<i>Ophioglossum californicum</i> California adder’s-tongue	–/–	4	–	Perennial herb; chaparral, vernal pools, valley and foothill grasslands; blooms Dec.–May; elevation 200–1,000 feet.	Less than 10 individuals of California adder’s-tongue were mapped in the northeastern corner of San Ysidro. California adder’s-tongue is a previously undocumented species at San Ysidro.
GYMNOSPERMS					
CUPRESSACEAE	CYPRESS FAMILY				
<i>Hesperocyparis forbesii</i> Tecate cypress	–/–	1B	MSCP	Evergreen tree; closed-cone coniferous forest, chaparral; Otay Mountain; elevation 700–5,000 feet.	Six additional populations of Tecate cypress were mapped at San Ysidro. In addition, hundreds of individuals were mapped in the southeastern corner of the site. Fifty individuals had been previously mapped at this location.

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
ANGIOSPERMS: DICOTS					
ASTERACEAE	SUNFLOWER FAMILY				
<i>Isocoma menziesii</i> var. <i>menziesii</i> [=var. <i>decumbens</i>] decumbent goldenbush	–/–	1B	–	Shrub; chaparral, coastal sage scrub, sandy soils, often in disturbed areas; blooms April–Nov.; elevation less than 500 feet.	Hundreds of individuals of decumbent goldenbush occur throughout the coastal sage scrub at San Ysidro. Decumbent goldenbush is a previously undocumented species at San Ysidro.
<i>Pentachaeta aurea</i> golden-rayed pentachaeta	–/–	4	–	Annual herb; cismontane woodland, coastal sage scrub, lower montane coniferous forest, perennial grasslands, blooms March–July; elevation 300–6,100 feet.	Less than 100 individuals of golden-rayed pentachaeta were mapped in the northeastern corner of San Ysidro. Golden-rayed pentachaeta is a previously undocumented species at San Ysidro.
CONVOLVULACEAE	MORNING-GLORY FAMILY				
<i>Convolvulus simulans</i> small-flowered morning glory	–/–	4	–	Annual herb; openings in chaparral, coastal sage scrub, valley and foothill grassland, clay substrate; blooms March–July; elevation less than 2,300 feet.	Less than 100 individuals of small-flowered morning glory were mapped within a clay lens at San Ysidro. Small-flowered morning glory is a previously undocumented species at San Ysidro.
<i>Dichondra occidentalis</i> western dichondra	–/–	4	–	Perennial herb; chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland; blooms Mar.–July; elevation less than 1,650 feet.	Western dichondra occurs in much of the coastal sage scrub at San Ysidro. Individuals total in the hundreds.

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
CRASSULACEAE					
					STONECROP FAMILY
<i>Dudleya variegata</i> variegated dudleya	-/-	1B	NE, MSCP	Perennial herb; openings in chaparral, coastal sage scrub, grasslands, vernal pools; blooms May–June; elevation less than 2,000 feet.	Two populations of variegated dudleya totaling less than 100 were mapped centrally and in the northeastern corner of the site along a road cut. Variegated dudleya is a previously undocumented species at San Ysidro.
ERICACEAE					
					HEATH FAMILY
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> summer holly	-/-	1B	–	Evergreen shrub; chaparral; blooms April–June; elevation less than 1,800 feet.	Less than 100 individuals of summer holly were mapped at two locations. Summer holly is a previously undocumented species at San Ysidro.
FABACEAE					
					LEGUME FAMILY
<i>Lotus crassifolius</i> var. <i>otayensis</i> Otay Mountain lotus	-/-	1B	–	Perennial herb; chaparral, metavolcanic substrate, often in disturbed areas; blooms May–Aug.; elevation 3,000–3,300 feet. Known only from Otay Mountain and one occurrence in Baja California.	Five locations of Otay Mountain lotus were mapped at San Ysidro. There are less than 20 individuals mapped. Otay Mountain lotus is a previously undocumented species at San Ysidro.

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
LAMIACEAE					
					MINT FAMILY
<i>Lepechinia ganderi</i> Gander's pitcher sage	--	1B	MSCP	Shrub; closed-cone coniferous forest, chaparral, coastal sage scrub, valley and foothill grassland, blooms June–July; elevation 1,000–3,500 feet. Known in California from fewer than 10 occurrences.	Gander's pitcher sage was mapped in the southeastern corner of the site. There are hundreds of individuals along the mapped slopes. Gander's pitcher sage is a previously undocumented species at San Ysidro.
<i>Salvia munzii</i> Munz's sage	--	2	–	Evergreen shrub; chaparral, coastal sage scrub, blooms Feb.–April; elevation less than 3,500 feet.	Two locations of Munz's sage were mapped at San Ysidro. There are less than 100 individuals at these locations.
RHAMNACEAE					
					BUCKTHORN FAMILY
<i>Ceanothus otayensis</i> Otay Mountain ceanothus	--	1B	–	Evergreen shrub; chaparral, metavolcanic or gabbroic; blooms Jan.–April; elevation 2,000–3,600 feet. Known only from the San Miguel and Otay Mountains.	Otay Mountain ceanothus was mapped in the southeastern corner of San Ysidro. Less than 10 individuals were mapped. Otay Mountain ceanothus is a previously undocumented species at San Ysidro.

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
ANGIOSPERMS: MONOCOTS					
LILIACEAE	LILY FAMILY				
<i>Calochortus dunnii</i> Dunn's mariposa lily	CR/-	1B	MSCP	Perennial herb (bulbiferous); closed-cone coniferous forest, chaparral, gabbroic or metavolcanic, rocky substrate; blooms April-June; elevation 1,200-6,000 feet.	Additional locations of Dunn's mariposa lily were mapped in the southeastern corner of San Ysidro. Additional individuals were mapped at a previously mapped location along the southern central boundary.
<i>Lilium humboldtii</i> spp. <i>ocellatum</i> ocellated lily	-/-	4	-	Perennial herb (bulbiferous); chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, riparian woodland; blooms March-July; elevation less than 6,000 feet.	One individual of Ocellated lily was mapped within the northeastern drainage at San Ysidro. Ocellated lily is a previously undocumented species at San Ysidro.
ORCHIDACEAE	ORCHID FAMILY				
<i>Piperia cooperi</i> chaparral rein-orchid	-/-	4	-	Perennial herb; chaparral, cismontane woodland, perennial grassland; blooms March to June; elevation less than 5,200 feet.	Ten individuals of chaparral rein-orchid were mapped at San Ysidro. Chaparral rein-orchid is a previously undocumented species at San Ysidro.

**TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)**

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
POACEAE					
GRASS FAMILY					
<i>Achnatherum diegoense</i> San Diego County needle grass	–/–	4	–	Perennial herb; rocky soils, chaparral, coastal sage scrub, often near streams; blooms Feb.– June; elevation less than 2,300 feet.	San Diego County needle grass is common within the coastal sage scrub at San Ysidro. Therefore, not all locations were mapped. San Diego County needle grass is a previously undocumented species at San Ysidro.
THEMIDACEAE					
<i>Muilla clevelandii</i> San Diego goldenstar	–/–	1B	MSCP	Perennial herb (bulbiferous); chaparral, coastal sage scrub, valley and foothill grassland, vernal pools, clay soils; blooms May; elevation 170– 1,500 feet.	San Diego goldenstar was mapped at three additional locations at San Ysidro. There are thousands of individuals.

STATE LISTED PLANTS

CR = State listed rare

CALIFORNIA NATIVE PLANT SOCIETY LISTS

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.

4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

CITY OF Chula Vista

NE = Narrow endemic

MSCP = Multiple Species Conservation Program covered species

TABLE 17
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
BIRDS (Nomenclature from American Ornithologists' Union 1998 and Unitt 2004)				
ODONTOPHORIDAE	NEW WORLD QUAIL			
<i>Callipepla californica californica</i>	California quail	CSS	C / Y	O, V
CATHARTIDAE	NEW WORLD VULTURES			
<i>Cathartes aura</i>	turkey vulture	F	C / M, S	O
COLUMBIDAE	PIGEONS & DOVES			
<i>Zenaida macroura marginella</i>	mourning dove	CSS	C / Y	O, V
APODIDAE	SWIFTS			
<i>Aeronautes saxatalis</i>	white-throated swift	F	C / Y	O, V
TROCHILIDAE	HUMMINGBIRDS			
<i>Calypte costae</i>	Costa's hummingbird	CSS	F / S	O, V
TYRANNIDAE	TYRANT FLYCATCHERS			
<i>Contopus sordidulus</i>	western wood-pewee	RW	F / S	O, V
<i>Myiarchus cinerascens cinerascens</i>	ash-throated flycatcher	CSS	C / S	O, V
<i>Tyrannus vociferans vociferans</i>	Cassin's kingbird	CSS	C / Y	O, V
CORVIDAE	CROWS, JAYS, & MAGPIES			
<i>Corvus brachyrhynchos hesperis</i>	American crow	F	C / Y	O, V
<i>Corvus corax clarionensis</i>	common raven	F	C / Y	O, V
ALAUDIDAE	LARKS			
<i>Eremophila alpestris</i>	horned lark	CSS	C / Y	O, V
HIRUNDINIDAE	SWALLOWS			
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow	F	C / S	O, V
AEGITHALIDAE	BUSHTIT			
<i>Psaltriparus minimus minimus</i>	bushtit	CSS	C / Y	O, V
TROGLODYTIDAE	WRENS			
<i>Thryomanes bewickii</i>	Bewick's wren	CSS	C / Y	O, V

TABLE 17
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
<i>Troglodytes aedon parkmanii</i>	house wren	CSS, RW	C / Y	O, V
SYLVIIDAE	GNATCATCHERS			
<i>Polioptila californica californica</i>	coastal California gnatcatcher	CSS	C / Y	O, V
TURDIDAE	THRUSHES			
<i>Sialia mexicana occidentalis</i>	western bluebird	CSS, RW	F / W	O
TIMALIIDAE	BABBLERS			
<i>Chamaea fasciata henshawi</i>	wrentit	CSS	C / Y	O, V
MIMIDAE	MOCKINGBIRDS & THRASHERS			
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	CSS, RW	C / Y	O, V
<i>Toxostoma redivivum redivivum</i>	California thrasher	CSS	F / Y	O, V
PTILOGONATIDAE	SILKY FLYCATCHERS			
<i>Phainopepla nitens lepida</i>	phainopepla	CSS	C / Y	O
PARULIDAE	WOOD WARBLERS			
<i>Geothlypis trichas</i>	common yellowthroat	RW	C / Y	O, V
<i>Wilsonia pusilla</i>	Wilson's warbler	RW	U / M	O
EMBERIZIDAE	EMBERIZIDS			
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	CSS	C / Y	O, V
<i>Chondestes grammacus strigatus</i>	lark sparrow	CSS	F / Y	O, V
<i>Melospiza melodia</i>	song sparrow	CSS	C / Y	O, V
<i>Pipilo crissalis</i>	California towhee	CSS	C / Y	O, V
<i>Pipilo maculatus</i>	spotted towhee	CSS, RW	C / Y	O, V
CARDINALIDAE	CARDINALS & GROSBEAKS			
<i>Passerina amoena</i>	lazuli bunting	CSS	F / C	O, V
ICTERIDAE	BLACKBIRDS & NEW WORLD ORIOLES			
<i>Sturnella neglecta</i>	western meadowlark	CSS	F / Y	O, V

TABLE 17
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
FRINGILLIDAE	FINCHES			
<i>Carduelis psaltria hesperophilus</i>	lesser goldfinch	CSS	C / Y	O, V
<i>Carpodacus mexicanus frontalis</i>	house finch	CSS	C / Y	O, V

HABITATS

CSS = Coastal sage scrub, inland sage scrub
F = Flying overhead
RW = Riparian 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)

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

EVIDENCE OF OCCURRENCE

O = Observed
V = Vocalization

TABLE 18
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO

Scientific Name	Common Name	Count						Seasonality
		4/27 D	5/17 D	6/23 D	4/19 N	5/19 N	6/21 N	
Point Count Location #1 – Coastal Sage Scrub, Annual Grassland/Disturbed Coastal Sage Scrub								
Point Count Survey Conducted During these Times		10:11A- 10:21A	6:26A- 6:36A	11:31A- 11:41A	8:28P- 8:38P	11:20P- 11:30P	10:15A- 10:25A	
TYTONIDAE <i>Tyto alba pratincola</i>	BARN OWLS common barn owl	-	-	-	-	1	-	Y
APODIDAE <i>Aeronautes saxatalis</i>	SWIFTS white-throated swift	-	4	-	-	-	-	Y
TROCHILIDAE <i>Calypte anna</i>	HUMMINGBIRDS Anna's hummingbird	-	-	1	-	-	-	Y
TYRANNIDAE <i>Tyrannus vociferans vociferans</i>	TYRANT FLYCATCHERS Cassin's kingbird	1	-	-	-	-	-	Y
CORVIDAE <i>Aphelocoma californica</i>	CROWS, JAYS, & MAGPIES western scrub-jay	1	-	-	-	-	-	Y
ALAUDIDAE <i>Eremophila alpestris</i>	LARKS horned lark	2	-	-	-	-	-	Y
MIMIDAE <i>Mimus polyglottos polyglottos</i>	MOCKINGBIRDS & THRASHERS northern mockingbird	1	-	-	-	-	-	Y
EMBERIZIDAE <i>Aimophila ruficeps canescens</i>	EMBERIZIDS southern California rufous-crowned sparrow	-	1	-	-	-	-	Y
<i>Pipilo crissalis</i>	California towhee	-	1	-	-	-	-	Y

TABLE 18
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/27 D	5/17 D	6/23 D	4/19 N	5/19 N	6/21 N	
CARDINALIDAE <i>Passerina caerulea salicaria</i>	CARDINALS & GROSBEAKS blue grosbeak	-	-	1	-	-	-	S
Point Count Location #2 – Coastal Sage Scrub, Disturbed Chamise Chaparral, Annual Grassland/Disturbed Coastal Sage Scrub								
	Point Count Survey Conducted During these Times	10:50A- 11:00A	7:11A- 7:21A	10:51A- 11:01A	7:44P- 7:54P	11:56P- 12:06A	9:35P- 9:45P	
CAPRIMULGIDAE <i>Phalaenoptilus nuttallii</i>	GOATSUCKERS common poorwill	-	-	-	1	-	-	Y
CORVIDAE <i>Corvus brachyrhynchos hesperis</i>	CROWS, JAYS, & MAGPIES American crow	1	-	-	-	-	-	Y
MIMIDAE <i>Mimus polyglottos polyglottos</i>	MOCKINGBIRDS & THRASHERS northern mockingbird	2	-	-	-	-	-	Y
EMBERIZIDAE <i>Pipilo crissalis</i>	EMBERIZIDS California towhee	2	1	-	-	-	-	Y
ICTERIDAE <i>Sturnella neglecta</i>	BLACKBIRDS & NEW WORLD ORIOLES western meadowlark	1	-	-	-	-	-	Y
FRINGILLIDAE <i>Carduelis psaltria hesperophilus</i>	FINCHES lesser goldfinch	-	-	1	-	-	-	Y

TABLE 18
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/27 D	5/17 D	6/23 D	4/19 N	5/19 N	6/21 N	
Point Count Location #3 – Annual Grassland/Disturbed Southern Mixed Chaparral								
Point Count Survey Conducted During these Times		11:45A- 1155A	8:00A- 8:10A	9:35A- 9:45A	9:11P- 9:21P	12:42A- 15:52A	8:52P- 9:02P	
ALAUDIDAE	LARKS							
<i>Eremophila alpestris</i>	horned lark	-	1	-	-	-	-	Y
TROGLODYTIDAE	WRENS							
<i>Salpinctes obsoletus obsoletus</i>	rock wren	-	1	1	-	-	-	Y
EMBERIZIDAE	EMBERIZIDS							
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	1	1	-	-	-	-	Y
<i>Chondestes grammacus strigatus</i>	lark sparrow	-	-	1	-	-	-	Y
<i>Melospiza melodia</i>	song sparrow							Y
<i>Pipilo crissalis</i>	California towhee	-	-	1	-	-	-	Y
Point Count Location #4 – Annual Grassland/Disturbed Southern Mixed Chaparral, Annual Grassland/Disturbed Coastal Sage Scrub								
Point Count Survey Conducted During these Times		12:06P- 12:16P	8:21A- 8:31A	9:56A- 10:06A	9:35P- 9:45P	1:01A- 1:11A	8:32P- 8:42P	
ODONTOPHORIDAE	NEW WORLD QUAIL							
<i>Callipepla californica californica</i>	California quail	1	-	-	-	-	-	Y
TROCHILIDAE	HUMMINGBIRDS							
<i>Calypte anna</i>	Anna's hummingbird	-	-	1	-	-	-	Y
ALAUDIDAE	LARKS							
<i>Eremophila alpestris</i>	horned lark	-	2	-	-	-	-	Y

TABLE 18
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/27 D	5/17 D	6/23 D	4/19 N	5/19 N	6/21 N	
MIMIDAE	MOCKINGBIRDS & THRASHERS							
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	-	1	-	-	-	-	Y
EMBERIZIDAE	EMBERIZIDS							
<i>Chondestes grammacus strigatus</i>	lark sparrow	2	-	-	-	-	-	Y
<i>Pipilo crissalis</i>	California towhee	2	-	-	-	-	-	Y
ICTERIDAE	BLACKBIRDS & NEW WORLD ORIOLES							
<i>Sturnella neglecta</i>	western meadowlark	-	1	-	-	-	-	Y

Habitats determined from Dudek 2009

D= Diurnal survey, N = Nocturnal survey. Nomenclature used is from American Ornithologists' Union 1998 and Unitt 2004.

SEASONALITY

S = Spring/summer resident; probable breeder on-site or in vicinity

Y = Year-round resident; probable breeder on-site or in vicinity

TABLE 19
SENSITIVE WILDLIFE SPECIES OCCURRING AT OTAY RANCH PRESERVE – SAN YSIDRO

Species	Status	Habitat	Occurrence/ Comments
REPTILES			
TEIIDAE WHIPTAIL LIZARDS			
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	CSC, MSCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	O
BOIDAE BOAS			
Coastal rosy boa <i>Lichanura trivirgata roseofusca</i>	FSC, *	Coastal sage scrub, chaparral in inland and desert locales with rocky soils.	O
CROTALIDAE RATTLESNAKES			
Red diamond rattlesnake <i>Crotalus ruber</i>	CSC	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.	O
BIRDS			
SYLVIIDAE GNATCATCHERS			
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	FT, CSC, MSCP	Coastal sage scrub, maritime succulent scrub. Resident.	O, V
EMBERIZIDAE EMBERIZIDS			
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	CSC, MSCP	Coastal sage scrub, chaparral, grassland. Resident.	O, V
MAMMALS			
LEPORIDAE RABBITS & HARES			
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	CSC	Open areas of scrub, grasslands, agricultural fields.	O

TABLE 19
SENSITIVE WILDLIFE SPECIES OCCURRING AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

STATUS CODES

Listed/Proposed

FT = Listed as threatened by the federal government

Other

CSC = California Department of Fish and Game species of special concern

MSCP = Multiple Species Conservation Program covered species

* = Taxa listed with an asterisk fall into one or more of the following categories:

- Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range
- Population(s) in California that may be peripheral to the major portion of a taxon's range but which are threatened with extirpation within California
- Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands)

EVIDENCE OF OCCURRENCE

O = Observed

V = Vocalization

ATTACHMENT 3

TABLE 20
2009-10 COST BREAKDOWN BY TASK FOR OTAY RANCH PRESERVE
SALT CREEK AND SAN YSIDRO

Task	Cost
Reconnaissance Site Visits	\$16,700
Photographic Monitoring	\$7,000
Rare Plant Surveys	\$9,100
Invasive Plant Surveys/Treatment	\$5,800
CAGN	\$22,600
CACW	\$4,300
Avian Point Count	\$12,700
QCB	\$3,000
Meetings and Coordination with POM & Land Managers	\$10,000
In House Meetings & Management	\$4,800
Work Plan & RMP	\$14,200
Approximate Total	\$110,200

ATTACHMENTS

ATTACHMENT 1

TABLE 1
RECONNAISSANCE SITE VISITS & FOCUSED SURVEYS AT
OTAY RANCH PRESERVE – SALT CREEK

Date	Field Personnel	Task
October 16, 2009	M. Dodero, A. Bennett	Reconnaissance Site Visit
October 29, 2010	M. Dodero, A. Bennett	Invasive Plant Survey
December 17, 2009	M. Dodero, A. Bennett	Reconnaissance Site Visit
January 11, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
February 9, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
March 17, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
March 31, 2010	M. Dodero, A. Bennett	Establish Site Photo Monitoring Points
April 2, 2010	M. Dodero, A. Bennett	Establish QCB & Site Photo Monitoring Points
April 6, 2010	E. Procsal, E. McKinney, A. Bennett, J. Bates	CAGN Protocol Survey
April 13, 2010	E. Procsal, E. McKinney, A. Bennett, P. Dolan	CAGN Protocol Survey
April 16, 2010	M. Dodero, A. Bennett	Rare Plant Survey
April 19, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
April 19, 2010	J. Lovio, E. Procsal	Avian Point Count
April 23, 2010	E. Procsal, E. McKinney	Avian Point Count
April 26, 2010	E. Procsal, E. McKinney, P. Dolan, B. Ogg	CAGN Protocol Survey
April 30, 2010	E. Procsal, E. McKinney, A. Bennett, P. Dolan	CAGN Protocol Survey
May 3, 2010	E. Procsal, E. McKinney, A. Bennett, P. Dolan	CAGN Protocol Survey
May 5, 2010	E. Procsal, A. Bennett	CACW Presence/Absence Survey
May 11, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
May 17, 2010	J. Lovio, E. Procsal	Avian Point Count
May 19, 2010	J. Lovio, E. Procsal	Avian Point Count
May 28, 2010	E. Procsal, R. Atik	CACW Presence/Absence Survey
June 2, 2010	E. Procsal, E. McKinney, A. Bennett, J. Bates	CAGN Protocol Survey
June 4, 2010	M. Dodero, A. Bennett	Rare Plant Survey
June 8, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit & Rare Plant Survey
June 9, 2010	E. Procsal, A. Bennett	CACW Presence/Absence Survey
June 14, 2010	J. Lovio, E. Procsal	Avian Point Count
June 22, 2010	M. Dodero, A. Bennett	Invasive Plant Survey
June 23, 2010	J. Lovio, E. Procsal	Avian Point Count
June 24, 2010	M. Dodero, A. Bennett & RECON crew	Invasive Plant Survey and Treatment
June 28, 2010	M. Dodero, A. Bennett	Rare Plant Survey

TABLE 2
COASTAL CALIFORNIA GNATCATCHER
PROTOCOL SURVEY EFFORT AND CONDITIONS - SALT CREEK

Date	Survey Site	Subarea	Surveyors	Beginning Conditions ¹	Ending Conditions ¹	Acres per Hour/ Team
4/6/10	Salt Creek	2, 4.5* / 1, 3.5*	B. Procsal, A. Bennett/ E. McKinney, J. Bates	6:30 A.M.; 44°F; 0 mph; 0% cover	12:00 P.M.; 77°F; 0 mph; 0% cover	12.0 / 11.9
4/13/10	Salt Creek	4.5*, 5 / 3.5*, 6	B. Procsal, P. Dolan/ E. McKinney, A. Bennett	6:45 A.M.; 49° F, wind 0-1 mph; 40% cover	12:00 P.M.; 70° F, wind 0-4 mph; 70% cover	13.2 / 13.6
4/26/10	Salt Creek	2, 4 / 1, 3	B. Procsal, P. Dolan/ E. McKinney, B. Ogg	6:00 A.M.; 56°F; 0 mph; 100% cover	12:00 P.M.; 74°F; 0-4 mph; 0% cover	15.0 / 14.7
4/30/10	Salt Creek	5 / 6	B. Procsal, P. Dolan/ E. McKinney, A. Bennett	6:00 A.M.; 48°F; 0-1 mph; 15% cover	12:00 P.M.; 70°F; 0-1 mph; 30% cover	7.5 / 8.0
5/3/10	Salt Creek	2, 4 / 1, 3	B. Procsal, P. Dolan/ E. McKinney, A. Bennett	6:00 A.M.; 62° F, wind 0-1 mph; 0% cover	12:00 P.M.; 78° F, wind 2-6 mph; 0% cover	15.0 / 14.7
6/2/10	Salt Creek	6 / 5	B. Procsal, A. Bennett/ E. McKinney, J. Bates	6:00 A.M.; 58°F; 0-2 mph; 98% cover	11:50 A.M.; 76°F; 1-4 mph; 10% cover	8.0 / 7.5

* = Half of Subarea was completed; ¹ Times are in Daylight Savings Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent

TABLE 3
COASTAL CACTUS WREN
NEST SURVEY EFFORT AND CONDITIONS AT OTAY RANCH PRESERVE – SALT CREEK

Date	Survey Site	Subarea	Surveyors	Beginning Conditions ¹	Ending Conditions ¹
5/5/10	Salt Creek	1,2, 5*	B. Procsal, A. Bennett	8:30 A.M.; 73°F; 0-1 mph; 0% cover	2:30 P.M.; 72°F; 1-4 mph; 0% cover
5/28/10	Salt Creek	3, 4, 5*	B. Procsal, R. Atik	9:00 A.M.; 69° F, wind 0-1 mph; 40% cover	3:00 P.M.; 73° F, wind 0-4 mph; 0% cover
6/9/10	Salt Creek	6	B. Procsal, A. Bennett	6:30 A.M.; 64°F; 0-1 mph; 15% cover	10:00 A.M.; 70°F; 0-1 mph; 30% cover

* = Half of Subarea was completed; ¹ Times are in Daylight Savings Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent

TABLE 4
AVIAN POINT COUNT SURVEY EFFORT AND CONDITIONS AT OTAY RANCH - SALT CREEK

Date	Survey Site	Type of Survey	Surveyors	Beginning Conditions ¹	Ending Conditions ¹
4/19/10	SC	N	B. Procsal, J. Lovio	10:49 P.M.; 58°F; wind 0 mph; 0% cc	1:50 A.M.; 49°F; wind 0-2 mph; 0% cc
4/23/10	SC	D	B. Procsal, E. McKinney	6:45 A.M.; 47° F, wind 2-5 mph; 0% cc	9:50 A.M.; 62° F, wind 0-1 mph; 0% cc
5/17/10	SC	D	B. Procsal, J. Lovio	9:27 A.M.; 54°F; wind 0-1 mph; 100% cc	12:02 P.M.; 63°F; wind 0-4 mph; 100% cc
5/19/10	SC	N	B. Procsal, J. Lovio	8:17 P.M.; 60° F, wind 0 mph; 0% cc	10:28 P.M.; 53° F, wind 0 mph; 0% cc
6/14/10	SC	N	B. Procsal, J. Lovio	8:30 P.M.; 61° F, wind 2 mph; 0% cc	10:34 A.M.; 58° F, wind 0-1 mph; 0% cc
6/23/10	SC	D	B. Procsal, J. Lovio	6:35 A.M.; 58° F, wind 0-1 mph; 100% cc	8:33 A.M.; 76° F, wind 1-3 mph; 0% cc

D= Diurnal survey, N = Nocturnal survey.

¹ Times are in Daylight Savings Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent; cc= cloud cover

TABLE 5
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH – SALT CREEK

Scientific Name	Common Name	Origin
LYCOPODS		
SELAGINELLACEAE	SPIKE-MOSS FAMILY	
<i>Selaginella cinerascens</i> A.A. Eaton	ashy spike-moss	N
PTERIDACEAE	BRAKE FAMILY	
<i>Pellaea mucronata</i> (D.C. Eaton) D.C. Eaton	bird's-foot fern	N
FERNS		
AIZOACEAE	FIG-MARIGOLD FAMILY	
<i>Mesembryanthemum crystallinum</i> L.	crystalline ice plant	I
<i>Sesuvium verrucosum</i> Raf.	western sea-purslane	N
AMARANTHACEAE	AMARANTH FAMILY	
<i>Chenopodium murale</i> L.	nettle-leaved goosefoot	I
APIACEAE (UMBELLIFERAE)	CARROT FAMILY	
<i>Apiastrum angustifolium</i> Nutt.	wild-celery	N
ASTERACEAE	SUNFLOWER FAMILY	
<i>Ambrosia [=Hymenoclea] monogyra</i> (A. Gray) Strother & B.G. Baldwin	desert fragrance	N
<i>Anthemis cotula</i> L.	mayweed	I
<i>Carduus pycnocephalus</i> L.	Italian thistle	I
<i>Conyza canadensis</i> (L.) Cronquist	horseweed	N
<i>Dittrichia graveolens</i> (L.) Greuter	stinkwort	I
<i>Hazardia squarrosa</i> (Hook. & Arn.) Greene	saw-toothed goldenbush	N
<i>Heterotheca grandiflora</i> Nutt.	telegraph weed	N
<i>Isocoma menziesii</i> (Hook. & Arn.) G.L. Nesom var. <i>decumbens</i>	decumbent goldenbush	N
<i>Isocoma menziesii</i> (Hook. & Arn.) G.L. Nesom var. <i>vernonioides</i> (Nutt.) G.L. Nesom	coast goldenbush	N
<i>Lactuca serriola</i> L.	prickly lettuce	I
<i>Lasthenia gracilis</i> (DC.) E. Greene	common goldenfields	N
<i>Pluchea odorata</i> (L.) Cass.	salt marsh fleabane	N
<i>Psilocarphus brevissimus</i> Nutt. var. <i>brevissimus</i>	dwarf woolly-heads	N
<i>Psilocarphus tenellus</i> Nutt.	woolly-heads	N
<i>Stephanomeria</i> sp.	wreath-plant	N
<i>Xanthium strumarium</i> L.	cocklebur	N

TABLE 5
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH – SALT CREEK
(continued)

Scientific Name	Common Name	Origin
BORAGINACEAE	BORAGE FAMILY	
<i>Harpagonella palmeri</i> A. Gray	Palmer's grapplinghook	N
CACTACEAE	CACTUS FAMILY	
<i>Cylindropuntia californica</i> [= <i>Opuntia parryi</i>] (Torr. & A. Gray) F.M. Knuth	snake cholla	N
CONVOLVULACEAE	MORNING-GLORY FAMILY	
<i>Cuscuta</i> sp.	dodder	N
CRASSULACEAE	STONECROP FAMILY	
<i>Dudleya variegata</i> (S. Watson) Moran	variegated dudleya	N
FABACEAE (LEGUMINOSAE)	LEGUME FAMILY	
<i>Lotus scoparius</i> (Nutt.) Ottley	California broom	N
<i>Trifolium hirtum</i> All.	rose clover	I
FAGACEAE	OAK FAMILY	
<i>Quercus dumosa</i> Nutt.	Nuttall's scrub oak	N
GENTIANACEAE	GENTIAN FAMILY	
<i>Zeltnera exaltatum</i> (Griseb.) G. Mans.	centaury	N
LAMIACEAE	MINT FAMILY	
<i>Salvia columbariae</i> Benth.	chia	N
<i>Salvia munzii</i> Epling	Munz's sage	N
<i>Trichostema lanceolatum</i> Benth.	vinegar weed	N
LYTHRACEAE	LOOSESTRIFE FAMILY	
<i>Ammannia robusta</i> Heer & Regel	grand redstem	N
MYOPORACEAE	MYOPORUM FAMILY	
<i>Myoporum parvifolium</i> R. Br.	creeping myoporum	I
ONAGRACEAE	EVENING-PRIMROSE FAMILY	
<i>Epilobium canum</i> (Greene) P.H. Raven	California fuchsia, zauschneria	N
PHRYMACEAE [=SCROPHULARIACEAE]	HOPSEED FAMILY	
<i>Mimulus brevipes</i> Benth.	hillside monkey-flower	N
POLEMONIACEAE	PHLOX FAMILY	
<i>Linanthus dianthiflorus</i> (Benth.) Greene	farinose ground pink	N
<i>Navarretia</i> sp.		

TABLE 5
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH – SALT CREEK
(continued)

Scientific Name	Common Name	Origin
PLANTAGINACEAE	PLANTAIN FAMILY	
<i>Plantago elongata</i> Pursh	prairie plantain	N
RHAMNACEAE	BUCKTHORN FAMILY	
<i>Ceanothus otayensis</i> McMinn.	Otay-lilac	N
<i>Ceanothus tomentosus</i> Parry	coast blue lilac	N
SAXIFRAGACEAE	SAXIFRAGE FAMILY	
<i>Jepsonia parryi</i> (Torr.) Small	mesa saxifrage	N
VERBENACEAE	VERVAIN FAMILY	
<i>Phyla</i> sp.	frog fruit	N
VIOLACEAE	VIOLET FAMILY	
<i>Viola pedunculata</i> Torr. & A. Gray	johnny-jump-up	N
ANGIOSPERMS: MONOCOTS		
ALISMATACEAE	WATER-PLANTAIN FAMILY	
<i>Echinodorus berteroi</i> (Spreng.) Fassett	burhead	N
ARECACEAE	PALM FAMILY	
<i>Phoenix</i> sp.	date palm	I
JUNCACEAE	RUSH FAMILY	
<i>Juncus bufonius</i> L.	toad rush	N
POACEAE (GRAMINEAE)	GRASS FAMILY	
<i>Deschampsia</i> sp.	hairgrass	N
<i>Gastridium ventricosum</i> (Gouan) Schinz & Thell.	nit grass	I
<i>Muhlenbergia microsperma</i> (DC.) Kunth	littleseed muhly	N
<i>Phalaris</i> sp.	canary grass	I
<i>Piptatherum [=Oryzopsis] miliaceum</i> (L.) Coss.	smilo grass	I
THEMIDACEAE	BRODIAEA FAMILY	
<i>Brodiaea terrestris</i> Kellogg ssp. <i>Kernensis</i> (Hoover) T. Niehaus	dwarf brodiaea	N
<i>Muilla clevelandii</i> (S. Watson) Hoover	San Diego goldenstar	N

TABLE 5
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH – SALT CREEK
(continued)

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

ORIGIN

N = Native to locality

I = Introduced species from outside locality

TABLE 6
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SALT CREEK

Scientific Name	Common Name
INVERTEBRATES	
PIERIDAE <i>Anthocharis sara</i> <i>Pieris rapae</i>	WHITES & SULPHURS Sara or Pacific orangetip cabbage white
RIODINIDAE <i>Apodemia virgulti</i>	METALMARKS Behr's metalmark
NYMPHALIDAE <i>Junonia coenia</i> <i>Phyciodes mylitta</i> <i>Vanessa cardui</i>	BRUSH-FOOTED BUTTERFLIES common buckeye mylitta crescent painted lady
AMPHIBIANS	
RANIDAE <i>Rana catesbeiana</i>	TRUE FROGS American bullfrog
REPTILES	
IGUANIDAE <i>Uta stansburiana</i>	IGUANID LIZARDS common side-blotched lizard
TEIIDAE <i>Aspidoscelis hyperythra beldingi</i>	WHIPTAIL LIZARDS Belding's orange-throated whiptail
COLUBRIDAE <i>Pituophis catenifer annectens</i>	COLUBRID SNAKES San Diego gophersnake
BIRDS	
ANATIDAE <i>Anas platyrhynchos platyrhynchos</i>	DUCKS, GEESE, & SWANS mallard
ODONTOPHORIDAE <i>Callipepla californica californica</i>	NEW WORLD QUAIL California quail
ACCIPITRIDAE <i>Buteo jamaicensis</i> <i>Circus cyaneus hudsonius</i>	HAWKS, KITES, & EAGLES red-tailed hawk northern harrier
FALCONIDAE <i>Falco sparverius sparverius</i>	FALCONS & CARACARAS American kestrel
RALLIDAE <i>Fulica americana americana</i>	RAILS, GALLINULES, & COOTS American coot
CHARADRIIDAE <i>Charadrius vociferus vociferus</i>	LAPWINGS & PLOVERS killdeer
COLUMBIDAE <i>Zenaida macroura marginella</i>	PIGEONS & DOVES mourning dove
CUCULIDAE <i>Geococcyx californianus</i>	CUCKOOS & ROADRUNNERS greater roadrunner
TYTONIDAE <i>Tyto alba pratincola</i>	BARN OWLS common barn owl

TABLE 6
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name
STRIGIDAE <i>Bubo virginianus</i>	TYPICAL OWLS great horned owl
CAPRIMULGIDAE <i>Chordeiles acutipennis texensis</i>	GOATSUCKERS lesser nighthawk
APODIDAE <i>Aeronautes saxatalis</i>	SWIFTS white-throated swift
TROCHILIDAE <i>Calypte anna</i> <i>Calypte costae</i>	HUMMINGBIRDS Anna's hummingbird Costa's hummingbird
PICIDAE <i>Picoides nuttallii</i> <i>Picoides pubescens turati</i>	WOODPECKERS & SAPSUCKERS Nuttall's woodpecker downy woodpecker
TYRANNIDAE <i>Contopus sordidulus</i> <i>Empidonax difficilis</i> <i>Myiarchus cinerascens cinerascens</i> <i>Sayornis nigricans semiatra</i> <i>Tyrannus vociferans vociferans</i>	TYRANT FLYCATCHERS western wood pewee Pacific slope flycatcher ash-throated flycatcher black phoebe Cassin's kingbird
VIREONIDAE <i>Vireo bellii pusillus</i>	VIREOS least Bell's vireo
CORVIDAE <i>Aphelocoma californica</i> <i>Corvus brachyrhynchos hesperis</i> <i>Corvus corax clarionensis</i>	CROWS, JAYS, & MAGPIES western scrub-jay American crow common raven
ALAUDIDAE <i>Eremophila alpestris</i>	LARKS horned lark
HIRUNDINIDAE <i>Hirundo rustica erythrogaster</i> <i>Petrochelidon pyrrhonota tachina</i> <i>Stelgidopteryx serripennis</i> <i>Tachycineta thalassina lepida</i>	SWALLOWS barn swallow cliff swallow northern rough-winged swallow violet-green swallow
AEGITHALIDAE <i>Psaltriparus minimus minimus</i>	BUSHTIT bushtit
TROGLODYTIDAE <i>Campylorhynchus brunneicapillus sandiegensis</i> <i>Thryomanes bewickii</i> <i>Troglodytes aedon parkmanii</i>	WRENS San Diego cactus wren Bewick's wren house wren
SYLVIIDAE <i>Polioptila caerulea</i> <i>Polioptila californica californica</i>	GNATCATCHERS blue-gray gnatcatcher coastal California gnatcatcher
TURDIDAE <i>Sialia mexicana occidentalis</i>	THRUSHES western bluebird
TIMALIIDAE <i>Chamaea fasciata henshawi</i>	BABBLERS wrentit

TABLE 6
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name
MIMIDAE	MOCKINGBIRDS & THRASHERS
<i>Mimus polyglottos polyglottos</i>	northern mockingbird
<i>Toxostoma redivivum redivivum</i>	California thrasher
STURNIDAE	STARLINGS & MYNAS
<i>Sturnus vulgaris</i>	European starling (I)
PARULIDAE	WOOD WARBLERS
<i>Dendroica petechia</i>	yellow warbler
<i>Geothlypis trichas</i>	common yellowthroat
<i>Icteria virens auricollis</i>	yellow-breasted chat
<i>Wilsonia pusilla</i>	Wilson's warbler
THRAUPIDAE	TANAGERS
<i>Piranga ludoviciana</i>	western tanager
EMBERIZIDAE	EMBERIZIDS
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow
<i>Ammodramus savannarum perpallidus</i>	grasshopper sparrow
<i>Amphispiza belli belli</i>	Bell's sage sparrow
<i>Chondestes grammacus strigatus</i>	lark sparrow
<i>Melospiza melodia</i>	song sparrow
<i>Pipilo crissalis</i>	California towhee
<i>Pipilo maculatus</i>	spotted towhee
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
CARDINALIDAE	CARDINALS & GROSBEAKS
<i>Passerina caerulea salicaria</i>	blue grosbeak
<i>Passerina amoena</i>	lazuli bunting
<i>Pheucticus melanocephalus maculatus</i>	black-headed grosbeak
ICTERIDAE	BLACKBIRDS & NEW WORLD ORIOLES
<i>Agelaius phoeniceus</i>	red-winged blackbird
<i>Icterus bullockii</i>	Bullock's oriole
<i>Icterus cucullatus nelsoni</i>	hooded oriole
<i>Molothrus ater</i>	brown-headed cowbird
<i>Sturnella neglecta</i>	western meadowlark
FRINGILLIDAE	FINCHES
<i>Carduelis psaltria hesperophilus</i>	lesser goldfinch
<i>Carduelis tristis salicamans</i>	American goldfinch
<i>Carpodacus mexicanus frontalis</i>	house finch
MAMMALS	
LEPORIDAE	RABBITS & HARES
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit
<i>Sylvilagus bachmani</i>	brush rabbit
SCIURIDAE	SQUIRRELS & CHIPMUNKS
<i>Spermophilus beecheyi</i>	California ground squirrel
MURIDAE	OLD WORLD MICE & RATS
<i>Neotoma sp.</i>	woodrat

TABLE 6
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name
CANIDAE <i>Canis latrans</i>	CANIDS coyote
EQUIDAE <i>Equus caballus</i>	HORSES & ASSES horse (I)
BOVIDAE <i>Bos primigenius</i>	CATTLE cattle (I)

(I) = Introduced species

TABLE 7
SENSITIVE PLANT SPECIES
PREVIOUSLY UNDOCUMENTED OR ADDITIONAL POPULATIONS AT OTAY RANCH PRESERVE – SALT CREEK

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
GYMNOSPERMS					
CUPRESSACEAE	CYPRESS FAMILY				
<i>Hesperocyparis forbesii</i> Tecate cypress	--	1B	MSCP	Evergreen tree; closed-cone coniferous forest, chaparral; Otay Mountain; elevation 700–5,000 feet.	Two additional populations of Tecate cypress were mapped in the southwestern section.
ANGIOSPERMS: DICOTS					
AMARANTHACEAE	AMARANTH FAMILY				
<i>Atriplex pacifica</i> south coast saltbush	--	1B	–	Annual herb; coastal bluff scrub, coastal dunes, coastal sage scrub, playas; blooms Mar.–Oct.; elevation less than 500 feet.	Two additional individuals of south coast saltbush
ASTERACEAE	SUNFLOWER FAMILY				
<i>Holocarpha virgata</i> ssp. <i>elongata</i> graceful tarplant	--	4	–	Annual herb; coastal sage scrub, cismontane woodland, valley and foothill grassland, chaparral; blooms July–Nov.; elevation 200–3,600 feet.	Two points were mapped for graceful tarplant along the southern boundary. Graceful tarplant is common between the two points and numbers in the thousands. Graceful tarplant is a previously undocumented species at Salt Creek.
<i>Isocoma menziesii</i> var. <i>menziesii</i> [=var. <i>decumbens</i>] decumbent goldenbush	--	1B	–	Shrub; chaparral, coastal sage scrub, sandy soils, often in disturbed areas; blooms April–Nov.; elevation less than 500 feet.	Decumbent goldenbush is common throughout the coastal sage scrub at Salt Creek. Individuals number in the hundreds. Decumbent goldenbush is a previously undocumented species at Salt Creek.

TABLE 7
SENSITIVE PLANT SPECIES
PREVIOUSLY UNDOCUMENTED OR ADDITIONAL POPULATIONS AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
BORAGINACEAE					
BORAGE FAMILY					
<i>Harpagonella palmeri</i> Palmer's grapplinghook	--	4	-	Annual herb; chaparral, coastal sage scrub, valley and foothill grassland; clay soils; blooms March–May; elevation less than 2,800 feet. Inconspicuous and easily overlooked.	Thousands of additional individuals of Palmer's grapplinghook were mapped along the western boundary of the site as well as centrally. A population was mapped along the southeastern boundary.
CACTACEAE					
CACTUS FAMILY					
<i>Cylindropuntia californica</i> [= <i>Opuntia californica</i> var. <i>californica</i> , <i>O. parryi</i> var. <i>serpentina</i>] snake cholla	--	1B	NE, MSCP	Succulent shrub; chaparral, coastal sage scrub; blooms April–May; elevation 100–500 feet.	Less than 100 individuals of snake cholla were mapped at Salt Creek. Previously, snake cholla had not been positively confirmed.
CRASSULACEAE					
STONECROP FAMILY					
<i>Dudleya variegata</i> variegated dudleya	--	1B	NE, MSCP	Perennial herb; openings in chaparral, coastal sage scrub, grasslands, vernal pools; blooms May–June; elevation less than 2,000 feet.	Hundreds of additional individuals of variegated dudleya were mapped at approximately nine locations.
FAGACEAE					
OAK FAMILY					
<i>Quercus dumosa</i> Nuttall's scrub oak	--	1B	-	Evergreen shrub; closed-cone coniferous forest, coastal chaparral, coastal sage scrub, sandy and clay loam soils; blooms Feb.–March; elevation less than 1,300 feet.	A stand of Nuttall's scrub oak was mapped along the central eastern boundary. Previously, only scrub oak (<i>Quercus berberidifolia</i>) had been identified; Nuttall's scrub oak is a previously undocumented species at Salt Creek.

TABLE 7
SENSITIVE PLANT SPECIES
PREVIOUSLY UNDOCUMENTED OR ADDITIONAL POPULATIONS AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
LAMIACEAE					
					MINT FAMILY
<i>Salvia munzii</i> Munz's sage	–/–	2	–	Evergreen shrub; chaparral, coastal sage scrub, blooms Feb.–April; elevation less than 3,500 feet.	Five locations of Munz's sage were mapped. Munz's sage is a previously undocumented species at Salt Creek.
RHAMNACEAE					
					BUCKTHORN FAMILY
<i>Ceanothus otayensis</i> Otay Mountain ceanothus	–/–	1B	–	Evergreen shrub; chaparral, metavolcanic or gabbroic; blooms Jan.–April; elevation 2,000–3,600 feet. Known only from the San Miguel and Otay Mountains.	One individual of Otay Mountain ceanothus was observed along the northern edge of the Tecate cypress stand along the southern boundary. It is presumed that this individual was planted, along with the Tecate cypress, along a pipeline. Otay Mountain ceanothus is a previously undocumented species at Salt Creek.
ANGIOSPERMS: MONOCOTS					
THEMIDACEAE					
<i>Mulla clevelandii</i> San Diego goldenstar	–/–	1B	MSCP	Perennial herb (bulbiferous); chaparral, coastal sage scrub, valley and foothill grassland, vernal pools, clay soils; blooms May; elevation 170–1,500 feet.	Thousands of individuals of San Diego goldenstar were mapped along the southeastern boundary. San Diego goldenstar is a previously undocumented species at Salt Creek.

TABLE 7
SENSITIVE PLANT SPECIES
PREVIOUSLY UNDOCUMENTED OR ADDITIONAL POPULATIONS AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

CALIFORNIA NATIVE PLANT SOCIETY LISTS

1A = Species presumed extinct.

1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.

4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

CITY OF CHULA VISTA

NE = Narrow endemic

MSCP = Multiple Species Conservation Program covered species

TABLE 8
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT THE OTAY RANCH PRESERVE – SALT CREEK

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
BIRDS (Nomenclature from American Ornithologists' Union 1998 and Unitt 2004)				
ANATIDAE	DUCKS, GEESE, & SWANS			
<i>Anas platyrhynchos platyrhynchos</i>	mallard	OW	C / Y	O
ODONTOPHORIDAE	NEW WORLD QUAIL			
<i>Callipepla californica californica</i>	California quail	CSS	C / Y	O, V
ACCIPITRIDAE	HAWKS, KITES, & EAGLES			
<i>Buteo jamaicensis</i>	red-tailed hawk	F	C / Y	O
<i>Circus cyaneus hudsonius</i>	northern harrier	F	F / Y	O
FALCONIDAE	FALCONS & CARACARAS			
<i>Falco sparverius sparverius</i>	American kestrel	F	C / Y	O
RALLIDAE	RAILS, GALLINULES, & COOTS			
<i>Fulica americana americana</i>	American coot	OW	C / W	O
CHARADRIIDAE	LAPWINGS & PLOVERS			
<i>Charadrius vociferus vociferus</i>	killdeer	FM	C / Y	O, V
COLUMBIDAE	PIGEONS & DOVES			
<i>Zenaidura macroura marginella</i>	mourning dove	CSS	C / Y	O, V
CUCULIDAE	CUCKOOS & ROADRUNNERS			
<i>Geococcyx californianus</i>	greater roadrunner	CSS	F / Y	O
TYTONIDAE	BARN OWLS			
<i>Tyto alba pratincola</i>	common barn owl	F	F / Y	O
STRIGIDAE	TYPICAL OWLS			
<i>Bubo virginianus</i>	great horned owl		F / Y	O
CAPRIMULGIDAE	GOATSUCKERS			
<i>Chordeiles acutipennis texensis</i>	lesser nighthawk	CSS	F / S	O

TABLE 8
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT THE OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
APODIDAE	SWIFTS			
<i>Aeronautes saxatalis</i>	white-throated swift	F	C / Y	O, V
TROCHILIDAE	HUMMINGBIRDS			
<i>Calypte anna</i>	Anna's hummingbird	CSS	C / Y	O, V
<i>Calypte costae</i>	Costa's hummingbird	CSS	F / S	O, V
PICIDAE	WOODPECKERS & SAPSUCKERS			
<i>Picoides nuttallii</i>	Nuttall's woodpecker	RW	C / Y	O, V
<i>Picoides pubescens turati</i>	downy woodpecker	RW	F / Y	O, V
TYRANNIDAE	TYRANT FLYCATCHERS			
<i>Contopus sordidulus</i>	western wood-pewee	RW	F / S	O, V
<i>Empidonax difficilis</i>	Pacific slope flycatcher	RW	C / S	O, V
<i>Myiarchus cinerascens cinerascens</i>	ash-throated flycatcher	CSS	C / S	O, V
<i>Sayornis nigricans semiatra</i>	black phoebe	CSS	C / Y	O, V
<i>Tyrannus vociferans vociferans</i>	Cassin's kingbird	CSS	C / Y	O, V
VIREONIDAE	VIREOS			
<i>Vireo bellii pusillus</i>	least Bell's vireo	RW	F / S	O, V
CORVIDAE	CROWS, JAYS, & MAGPIES			
<i>Aphelocoma californica</i>	western scrub-jay	CSS	C / Y	O, V
<i>Corvus brachyrhynchos hesperis</i>	American crow	F	C / Y	O, V
<i>Corvus corax clarionensis</i>	common raven	F	C / Y	O, V
ALAUDIDAE	LARKS			
<i>Eremophila alpestris</i>	horned lark	CSS	C / Y	O, V
HIRUNDINIDAE	SWALLOWS			
<i>Hirundo rustica erythrogaster</i>	barn swallow	F	U / M	O
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow	F	C / S	O, V
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow	F	C / S	O, V
<i>Tachycineta thalassina lepida</i>	violet-green swallow	F	F / M	O

TABLE 8
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT THE OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
AEGITHALIDAE	BUSHTIT			
<i>Psaltriparus minimus minimus</i>	bushtit	CSS	C / Y	O, V
TROGLODYTIDAE	WRENS			
<i>Campylorhynchus brunneicapillus sandiegensis</i>	San Diego cactus wren	CSS	F / Y	O, V
<i>Thryomanes bewickii</i>	Bewick's wren	CSS	C / Y	O, V
<i>Troglodytes aedon parkmanii</i>	house wren	CSS, RW	C / Y	O, V
SYLVIIDAE	GNATCATCHERS			
<i>Polioptila caerulea</i>	blue-gray gnatcatcher	CSS	F / Y	O
<i>Polioptila californica californica</i>	coastal California gnatcatcher	CSS	C / Y	O, V
TURDIDAE	THRUSHES			
<i>Sialia mexicana occidentalis</i>	western bluebird	CSS, RW	F / W	O
TIMALIIDAE	BABLERS			
<i>Chamaea fasciata henshawi</i>	wrentit	CSS	C / Y	O, V
MIMIDAE	MOCKINGBIRDS & THRASHERS			
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	CSS, RW	C / Y	O, V
<i>Toxostoma redivivum redivivum</i>	California thrasher	CSS	F / Y	O, V
STURNIDAE	STARLINGS & MYNAS			
<i>Sturnus vulgaris</i>	European starling (I)	CSS, RW	C / Y	O, V
PARULIDAE	WOOD WARBLERS			
<i>Dendroica petechia</i>	yellow warbler	RW	C / S	O, V
<i>Geothlypis trichas</i>	common yellowthroat	RW	C / Y	O, V
<i>Icteria virens auricollis</i>	yellow-breasted chat	RW	C / Y	O, V
<i>Wilsonia pusilla</i>	Wilson's warbler	RW	U / M	O
THRAUPIDAE	TANAGERS			
<i>Piranga ludoviciana</i>	western tanager	CSS	U / M	O

TABLE 8
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT THE OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
EMBERIZIDAE		EMBERIZIDS		
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	CSS	C / Y	O, V
<i>Amphispiza belli belli</i>	Bell's sage sparrow	CSS	F / Y	O, V
<i>Chondestes grammacus strigatus</i>	lark sparrow	CSS	F / Y	O, V
<i>Melospiza melodia</i>	song sparrow	CSS	C / Y	O, V
<i>Pipilo crissalis</i>	California towhee	CSS	C / Y	O, V
<i>Pipilo maculatus</i>	spotted towhee	CSS, RW	C / Y	O, V
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	CSS	C / W	O, V
CARDINALIDAE		CARDINALS & GROSBEAKS		
<i>Passerina caerulea salicaria</i>	blue grosbeak	RW	F / S	O, V
<i>Passerina amoena</i>	lazuli bunting	CSS	F / C	O, V
<i>Pheucticus melanocephalus maculatus</i>	black-headed grosbeak	RW	C / S	O, V
ICTERIDAE		BLACKBIRDS & NEW WORLD ORIOLES		
<i>Agelaius phoeniceus</i>	red-winged blackbird	FM	C / Y	O, V
<i>Icterus bullockii</i>	Bullock's oriole	RW	F / S	O, V
<i>Icterus cucullatus nelsoni</i>	hooded oriole	RW	F / S	O, V
<i>Molothrus ater</i>	brown-headed cowbird	RW	F / Y	O, V
<i>Sturnella neglecta</i>	western meadowlark	CSS	F / Y	O, V
FRINGILLIDAE		FINCHES		
<i>Carduelis psaltria hesperophilus</i>	lesser goldfinch	CSS	C / Y	O, V
<i>Carduelis tristis salicamans</i>	American goldfinch	CSS	C / Y	O, V
<i>Carpodacus mexicanus frontalis</i>	house finch	CSS	C / Y	O, V

(I) = Introduced species

TABLE 8
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT THE OTAY RANCH PRESERVE – SALT CREEK
(continued)

HABITATS

CSS = Coastal sage scrub, inland sage scrub
F = Flying overhead
FM = Freshwater marsh
OW = Open water (reservoirs, ponds, streams, lakes)
RW = Riparian woodlands
CMC = Coastal mixed, mixed, or chamise chaparral

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)

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

EVIDENCE OF OCCURRENCE

O = Observed
V = Vocalization

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
Point Count Location #1 – Coastal Sage Scrub and Maritime Succulent Scrub								
Point Count Survey Conducted During these Times		6:45A- 6:55A	9:27A- 9:37A	8:32A- 8:42A	10:49P- 10:59P	10:18P- 10:28P	8:30P- 8:40P	
ODONTOPHORIDAE <i>Callipepla californica californica</i>	NEW WORLD QUAIL California quail	-	1	-	-	-	-	Y
TYRANNIDAE <i>Sayornis nigricans semiatra</i>	TYRANT FLYCATCHERS black phoebe	-	1	-	-	-	-	Y
HIRUNDINIDAE <i>Petrochelidon pyrrhonota tachina</i>	SWALLOWS cliff swallow	-	-	3	-	-	-	S
EMBERIZIDAE <i>Amphispiza belli belli</i>	EMBERIZIDS Bell's sage sparrow	-	2	-	-	-	-	Y
<i>Pipilo crissalis</i>	California towhee	1	-	-	-	-	-	Y
Point Count Location #2 – Coastal Sage Scrub								
Point Count Survey Conducted During these Times		7:04A- 7:14A	9:47A- 9:57A	8:11A- 8:21A	11:13P- 11:23P	9:56P- 10:06P	8:50P- 9:00P	
CORVIDAE <i>Corvus corax clarionensis</i>	CROWS, JAYS, & MAGPIES common raven	3	-	-	-	-	-	Y
ALAUDIDAE <i>Eremophila alpestris</i>	LARKS horned lark	2	-	-	-	-	-	Y

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
Point Count Location #3 – Coastal Sage Scrub Habitat, Disturbed Coastal Sage Scrub, and Mulefat Scrub								
Point Count Survey Conducted During these Times		7:23A- 7:33A	10:06A- 10:16A	7:46A- 7:56A	11:40P- 11:50P	8:41P- 8:51P	9:12P- 9:22P	
ODONTOPHORIDAE	NEW WORLD QUAIL							
<i>Callipepla californica californica</i>	California quail	-	-	1	-	-	-	Y
ACCIPITRIDAE	HAWKS, KITES, & EAGLES							
<i>Buteo jamaicensis</i>	red-tailed hawk	-	1	-	-	-	-	Y
APODIDAE	SWIFTS							
<i>Aeronautes saxatalis</i>	white-throated swift	-	3	-	-	-	-	Y
CORVIDAE	CROWS, JAYS, & MAGPIES							
<i>Corvus corax clarionensis</i>	common raven	1	-	-	-	-	-	Y
HIRUNDINIDAE	SWALLOWS							
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow	-	20	2	-	-	-	S
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow	4						S
TROGLODYTIDAE	WRENS							
<i>Thryomanes bewickii</i>	Bewick's wren	2	-	-	-	-	-	Y
PARULIDAE	WOOD WARBLERS							
<i>Geothlypis trichas</i>	common yellowthroat	-	-	1	-	-	-	Y
<i>Icteria virens auricollis</i>	yellow-breasted chat	-	1	-	-	-	-	Y
EMBERIZIDAE	EMBERIZIDS							
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	-	-	1	-	-	-	Y
<i>Ammodramus savannarum perpallidus</i>	grasshopper sparrow	-	-	1	-	-	-	Y
<i>Melospiza melodia</i>	song sparrow	-	2	-	-	-	-	Y

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
<i>Pipilo crissalis</i>	California towhee	-	1	-	-	-	-	Y
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	1	-	-	-	-	-	W
CARDINALIDAE	CARDINALS & GROSBEAKS							
<i>Passerina caerulea salicaria</i>	blue grosbeak	-	-	2	-	-	-	S
FRINGILLIDAE	FINCHES							
<i>Carduelis tristis salicamans</i>	American goldfinch	-	-	2	-	-	-	Y
Point Count Location #4 –Southern Willow Scrub, Coastal Sage Scrub, Disturbed Coastal Sage Scrub, Annual Grassland/Disturbed Coastal Sage Scrub								
Point Count Survey Conducted During these Times		8:11A- 8:21A	10:33A- 10:43A	7:26A- 7:36A	12:20A- 12:30A	8:17P- 8:27P	9:33P- 9:43P	
ODONTOPHORIDAE	NEW WORLD QUAIL							
<i>Callipepla californica californica</i>	California quail	-	-	1	-	-	-	Y
TYTONIDAE	BARN OWLS							
<i>Tyto alba pratincola</i>	common barn owl	-	-	-	-	-	1	Y
PICIDAE	WOODPECKERS & SAPSUCKERS							
<i>Picoides nuttallii</i>	Nuttall's woodpecker	1	1	-	-	-	-	Y
TYRANNIDAE	TYRANT FLYCATCHERS							
<i>Empidonax difficilis</i>	Pacific slope flycatcher	1	1	-	-	-	-	S
<i>Myiarchus cinerascens cinerascens</i>	ash-throated flycatcher	-	1	-	-	-	-	S
<i>Sayornis nigricans semiatra</i>	black phoebe	-	-	1	-	-	-	Y
HIRUNDINIDAE	SWALLOWS							
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow	-	7	-	-	-	-	S

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
AEGITHALIDAE <i>Psaltriparus minimus minimus</i>	BUSHTIT bushtit	-	4	-	-	-	-	Y
TROGLODYTIDAE <i>Thryomanes bewickii</i>	WRENS Bewick's wren	3	-	-	-	-	-	Y
MIMIDAE <i>Mimus polyglottos polyglottos</i>	MOCKINGBIRDS & THRASHERS northern mockingbird	-	1	-	-	-	-	Y
PARULIDAE <i>Dendroica petechia</i>	WOOD WARBLERS yellow warbler	-	1	-	-	-	-	S
<i>Geothlypis trichas</i>	common yellowthroat	1	2	2	-	-	-	Y
<i>Wilsonia pusilla</i>	Wilson's warbler	-	1	-	-	-	-	M
EMBERIZIDAE <i>Aimophila ruficeps canescens</i>	EMBERIZIDS southern California rufous-crowned sparrow	1	-	-	-	-	-	Y
<i>Melospiza melodia</i>	song sparrow	2	2	1	-	-	-	Y
<i>Pipilo crissalis</i>	California towhee		-	2	-	-	-	Y
<i>Pipilo maculatus</i>	spotted towhee	1	-		-	-	-	Y
CARDINALIDAE <i>Passerina amoena</i>	CARDINALS & GROSBEAKS lazuli bunting	1	-	-	-	-	-	S
<i>Pheucticus melanocephalus maculatus</i>	black-headed grosbeak	1	-	-	-	-	-	S
FRINGILLIDAE <i>Carpodacus mexicanus frontalis</i>	FINCHES house finch	-	-	2	-	-	-	Y

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
Point Count Location #5 – Coastal Sage Scrub Habitat and Mulefat Scrub								
	Point Count Survey Conducted During these Times	9:17A- 9:27A	11:22A- 11:32A	6:54A- 7:04A	1:13A- 1:23A	9:10P- 9:20P	10:03P- 10:13P	
ODONTOPHORIDAE	NEW WORLD QUAIL							
<i>Callipepla californica californica</i>	California quail	-	-	3	-	-	-	Y
ACCIPITRIDAE	HAWKS, KITES, & EAGLES							
<i>Buteo jamaicensis</i>	red-tailed hawk	3	-	-	-	-	-	Y
TYTONIDAE	BARN OWLS							
<i>Tyto alba pratincola</i>	common barn owl	-	-	-	-	1	-	Y
HIRUNDINIDAE	SWALLOWS							
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow	-	-	1	-	-	-	S
AEGITHALIDAE	BUSHTIT							
<i>Psaltriparus minimus minimus</i>	bushtit	-	1	2	-	-	-	Y
SYLVIIDAE	GNATCATCHERS							
<i>Polioptila californica californica</i>	coastal California gnatcatcher	2	1	-	-	-	-	Y
MIMIDAE	MOCKINGBIRDS & THRASHERS							
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	3	1	-	-	-	-	Y
PARULIDAE	WOOD WARBLERS							
<i>Icteria virens auricollis</i>	yellow-breasted chat	-	1	-	-	-	-	Y
EMBERIZIDAE	EMBERIZIDS							
<i>Melospiza melodia</i>	song sparrow	1	1	-	-	-	-	Y
<i>Pipilo crissalis</i>	California towhee	2	1	1	-	-	-	Y

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
CARDINALIDAE <i>Passerina amoena</i>	CARDINALS & GROSBEAKS lazuli bunting	1	-	-	-	-	-	S
ICTERIDAE <i>Icterus cucullatus nelsoni</i>	BLACKBIRDS & NEW WORLD ORIOLES hooded oriole	-	1	-	-	-	-	S
FRINGILLIDAE <i>Carduelis psaltria hesperophilus</i> <i>Carpodacus mexicanus frontalis</i>	FINCHES lesser goldfinch house finch	2	3 2	- 4	-	-	-	Y Y
Point Count Location #6 – Coastal Sage Scrub Habitat								
Point Count Survey Conducted During these Times		9:40A- 9:50A	11:52A- 12:02P	6:35A- 6:45A	1:40A- 1:50A	9:32P- 9:42P	10:24P- 10:34P	
CAPRIMULGIDAE <i>Chordeiles acutipennis texensis</i>	GOATSUCKERS lesser nighthawk	-	-	-	1	-	-	S
TROGLODYTIDAE <i>Campylorhynchus brunneicapillus sandiegensis</i>	WRENS San Diego cactus wren	-	-	2	-	-	-	Y
MIMIDAE <i>Mimus polyglottos polyglottos</i> <i>Toxostoma redivivum redivivum</i>	MOCKINGBIRDS & THRASHERS northern mockingbird California thrasher	2	-	-	-	-	-	Y Y
EMBERIZIDAE <i>Pipilo crissalis</i> <i>Zonotrichia leucophrys</i>	EMBERIZIDS California towhee white-crowned sparrow	-	-	1	-	-	-	Y W
ICTERIDAE <i>Icterus cucullatus nelsoni</i>	BLACKBIRDS & NEW WORLD ORIOLES hooded oriole	-	-	1	-	-	-	S

TABLE 9
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/23 D	5/17 D	6/23 D	4/19 N	5/19 N	6/14 N	
FRINGILLIDAE <i>Carduelis psaltria hesperophilus</i>	FINCHES lesser goldfinch	5	-	-	-	-	-	Y

Habitats determined from Dudek 2009

D= Diurnal survey, N = Nocturnal survey. Nomenclature used is from American Ornithologists' Union 1998 and Unitt 2004.

SEASONALITY

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

TABLE 10
SENSITIVE WILDLIFE SPECIES OCCURRING AT OTAY RANCH PRESERVE – SALT CREEK

Species	Status	Habitat	Occurrence/ Comments
REPTILES			
TEIIDAE WHIPTAIL LIZARDS			
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	CSC, MSCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	O
BIRDS			
ACCIPITRIDAE HAWKS, KITES, & EAGLES			
Northern harrier (nesting) <i>Circus cyaneus hudsonius</i>	CSC, MSCP	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.	O
VIREONIDAE VIREOS			
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	FE, SE, MSCP	Willow riparian woodlands. Summer resident.	O, V
TROGLODYTIDAE WRENS			
Coastal cactus wren <i>Campylorhynchus brunneicapillus couesi</i>	CSC, MSCP, *	Maritime succulent scrub, coastal sage scrub with <i>Opuntia</i> thickets. Rare localized resident.	O, V
SYLVIIDAE GNATCATCHERS			
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, CSC, MSCP	Coastal sage scrub, maritime succulent scrub. Resident.	O, V
TURDIDAE THRUSHES			
Western bluebird <i>Sialia mexicana occidentalis</i>	MSCP	Open woodlands, farmlands, orchards.	O

TABLE 10
SENSITIVE WILDLIFE SPECIES OCCURRING AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

Species	Status	Habitat	Occurrence/ Comments
PARULIDAE WOOD WARBLERS			
Yellow warbler (nesting) <i>Dendroica petechia</i>	CSC	Breeding restricted to riparian woodland. Spring and fall migrant, localized summer resident, rare winter visitor.	O, V
Yellow-breasted chat (nesting) <i>Icteria virens auricollis</i>	CSC	Dense riparian woodland. Localized summer resident.	O, V
EMBERIZIDAE EMBERIZIDS			
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	CSC, MSCP	Coastal sage scrub, chaparral, grassland. Resident.	O, V
Grasshopper sparrow (nesting) <i>Ammodramus savannarum perpallidus</i>		Tall grass areas. Localized summer resident, rare in winter.	O, V
MAMMALS			
LEPORIDAE RABBITS & HARES			
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	CSC	Open areas of scrub, grasslands, agricultural fields.	O

TABLE 10
SENSITIVE WILDLIFE SPECIES OCCURRING AT OTAY RANCH PRESERVE – SALT CREEK
(continued)

STATUS CODES

Listed/Proposed

- FE = Listed as endangered by the federal government
FT = Listed as threatened by the federal government
SE = Listed as endangered by the state of California

Other

- CSC = California Department of Fish and Game species of special concern
MSCP = Multiple Species Conservation Program covered species
* = Taxa listed with an asterisk fall into one or more of the following categories:
- Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines
 - Taxa that are biologically rare, very restricted in distribution, or declining throughout their range
 - Population(s) in California that may be peripheral to the major portion of a taxon's range but which are threatened with extirpation within California
 - Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands)

EVIDENCE OF OCCURRENCE

- O = Observed
V = Vocalization

ATTACHMENT 2

TABLE 11
RECONNAISSANCE SITE VISITS & SURVEYS AT
OTAY RANCH PRESERVE – SAN YSIDRO

Date	Personnel	Task
October 19, 2009	M. Dodero, A. Bennett	Reconnaissance Site Visit
October 22, 2009	M. Dodero, A. Bennett	Reconnaissance Site Visit
October 29, 2010	M. Dodero, A. Bennett	Invasive Plant Survey
December 17, 2009	M. Dodero, A. Bennett	Reconnaissance Site Visit
January 11, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
February 4, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
March 16, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
April 7, 2010	M. Dodero, A. Bennett	Establish QCB & Site Photo Monitoring Points
April 9, 2010	M. Dodero, A. Bennett	Establish QCB & Site Photo Monitoring Points
April 14, 2010	M. Dodero, A. Bennett	Establish Site Photo Monitoring Points
April 15, 2010	M. Dodero, A. Bennett	Rare Plant Survey
April 19, 2010	J. Lovio, E. Procsal	Avian Point Count
April 27, 2010	E. Procsal, J. Bates	Avian Point Count
May 7, 2010	E. Procsal, A. Bennett	CAGN Protocol Survey
May 15, 2010	M. Dodero, A. Bennett	Reconnaissance Site Visit
May 17, 2010	J. Lovio, E. Procsal	Avian Point Count
May 17, 2010	E. McKinney, A. Bennett	CAGN Protocol Survey
May 19, 2010	J. Lovio, E. Procsal	Avian Point Count
May 25, 2010	M. Dodero, A. Bennett	Rare Plant Survey
May 27, 2010	E. McKinney, A. Bennett	CAGN Protocol Survey
June 1, 2010	M. Dodero, A. Bennett	Rare Plant Survey
June 21, 2010	J. Lovio, E. Procsal	Avian Point Count
June 22, 2010	M. Dodero, A. Bennett	Invasive Plant Survey
June 23, 2010	J. Lovio, E. Procsal	Avian Point Count

TABLE 12
COASTAL CALIFORNIA GNATCATCHER
PROTOCOL SURVEY EFFORT AND CONDITIONS - SAN YSIDRO

Date	Survey Site	Subarea	Surveyors	Beginning Conditions ¹	Ending Conditions ¹	Acres per Hour/ Team
5/7/10	San Ysidro	-	B. Procsal, A. Bennett	6:00 A.M.; 54°F; 0-1 mph; 0% cover	11:00 A.M.; 73°F; 2-4 mph; 0% cover	12.6
5/17/10	San Ysidro	-	E. McKinney, A. Bennett	7:30 A.M.; 56° F, wind 0-2 mph; 100% cover	12:00 P.M.; 64° F, wind 1-3 mph; 100% cover	14.0
5/27/10	San Ysidro	-	E. McKinney, A. Bennett	6:45 A.M.; 59° F, wind 0-2 mph; 40% cover	9:45 A.M.; 70° F, wind 0-2 mph; 55% cover	14.7

¹ Times are in Daylight Savings Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent

TABLE 13
AVIAN POINT COUNT SURVEY EFFORT AND CONDITIONS AT OTAY RANCH PRESERVE - SAN YSIDRO

Date	Survey Site	Type of Survey	Surveyors	Beginning Conditions ¹	Ending Conditions ¹
4/19/10	SY	N	B. Procsal, J. Lovio	7:44 P.M.; 58°F; wind 0 mph; 0% cc	9:45 P.M.; 49°F; wind 0-2 mph; 0% cc
4/27/10	SY	D	B. Procsal, J. Bates	10:11 A.M.; 64°F; wind 2-4 mph; 30% cc	12:16 P.M.; 59°F; wind 0-4 mph; 30% cc
5/17/10	SY	D	B. Procsal, J. Lovio	6:26 A.M.; 54°F; wind 0-1 mph; 100% cc	8:31 A.M.; 63°F; wind 0-4 mph; 100% cc
5/19/10	SY	N	B. Procsal, J. Lovio	11:20 P.M.; 60° F, wind 0 mph; 0% cc	1:11 A.M.; 53° F, wind 0 mph; 0% cc
6/21/10	SY	N	B. Procsal, J. Lovio	8:32 P.M.; 53°F; wind 0-1 mph; 0% cc	10:25 P.M.; 52°F; wind 0-1 mph; 10% cc
6/23/10	SY	D	B. Procsal, J. Lovio	9:35 A.M.; 58° F, wind 0-1 mph; 100% cc	11:41 A.M.; 76° F, wind 1-3 mph; 0% cc

D= Diurnal survey, N = Nocturnal survey.

¹ Times are in Daylight Savings Time; °F = degrees Fahrenheit; mph = miles per hour; % = percent; cc= cloud cover

TABLE 14
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH - SAN YSIDRO

Scientific Name	Common Name	Origin
ASPLENIACEAE	SPLEENWORT FAMILY	
<i>Asplenium vespertinum</i> Maxon	western spleenwort	N
OPHIOGLOSSACEAE	ADDER'S TONGUE FAMILY	
<i>Ophioglossum californicum</i> Prantl.	California adder's-tongue	N
PTERIDACEAE	BRAKE FAMILY	
<i>Aspidotis californica</i> (Hook.) Copel.	California lace fern	N
APIACEAE (UMBELLIFERAE)	CARROT FAMILY	
<i>Apiastrum angustifolium</i> Nutt.	wild-celery	N
ASTERACEAE	SUNFLOWER FAMILY	
<i>Carduus pycnocephalus</i> L.	Italian thistle	I
<i>Conyza canadensis</i> (L.) Cronquist	horseweed	N
<i>Dittrichia graveolens</i> (L.) Greuter	stinkwort	I
<i>Gutierrezia sarothrae</i> (Pursh) Britton & Rusby	broom snakeweed, matchweed	N
<i>Hedypnois cretica</i> (L.) Dum. Cours.	crete weed	I
<i>Helianthus gracilentus</i> A. Gray	slender sunflower	N
<i>Hypochaeris glabra</i> L.	smooth cat's-ear	I
<i>Isocoma menziesii</i> (Hook & Arn.) G. L. Nesom var. <i>decumbens</i> (Greene) G. L. Nesom	decumbent goldenbush	N
<i>Lasthenia gracilis</i> (DC.) E. Greene	common goldenfields	N
<i>Madia</i> sp.	madia	N
<i>Pentachaeta aurea</i> Nutt.	golden-rayed pentachaeta	N
<i>Solidago velutina</i> DC. ssp. <i>californica</i> (Nutt.) Semple	California goldenrod	N
<i>Sonchus oleraceus</i> L.	common sow thistle	I
<i>Venegasia carpesioides</i> DC.	Jesuit flower	N
BORAGINACEAE	BORAGE FAMILY	
<i>Eucrypta chrysanthemifolia</i> (Benth.) Greene	eucrypta	N
BRASSICACEAE (CRUCIFERAE)	MUSTARD FAMILY	
<i>Cardamine californica</i> (Nutt.) Greene	milk maids, tooth wort	N
<i>Sisymbrium orientale</i> L.	mustard	I
<i>Thysanocarpus laciniatus</i> Torrey & A. Gray	notch fringedpod	N
CONVOLVULACEAE	MORNING-GLORY FAMILY	
<i>Convolvulus simulans</i> L.M. Perry	small-flowered morning glory	N
<i>Dichondra occidentalis</i> House	western dichondra	N

TABLE 14
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH - SAN YSIDRO
(continued)

Scientific Name	Common Name	Origin
CRASSULACEAE	STONECROP FAMILY	
<i>Crassula connata</i> (Ruiz & Pav.) A. Berger	pygmy-weed	N
<i>Dudleya variegata</i> (S. Watson) Moran	variegated dudleya	N
ERICACEAE	HEATH FAMILY	
<i>Comarostaphylis diversifolia</i> (Parry) Greene ssp. <i>diversifolia</i>	summer holly	N
EUPHORBIACEAE	SPURGE FAMILY	
<i>Croton</i> [= <i>Eremocarpus</i>] <i>setigerus</i> Hook.	dove weed	N
<i>Euphorbia peplus</i> L.	petty spurge	I
FABACEAE (LEGUMINOSAE)	LEGUME FAMILY	
<i>Astragalus gambelianus</i> E. Sheldon	Gambel's locoweed	N
<i>Lotus crassifolius</i> (Benth.) Greene var. <i>otayensis</i> Isely	Otay Mountain lotus	N
<i>Lotus hamatus</i> Greene	grab lotus	N
<i>Lotus purshianus</i> Clem. & E.G. Clem. var. <i>purshianus</i>	Spanish clover	N
<i>Lotus scoparius</i> (Torr. & A. Gray) Ottley var. <i>brevialatus</i> Ottley	short-wing deerweed	N
<i>Lotus strigosus</i> (Nutt.) Greene	Bishop's lotus	N
<i>Lupinus bicolor</i> Lindl.	miniature lupine	N
<i>Lupinus concinnus</i> J. Agardh	bajada lupine	N
<i>Medicago polymorpha</i> L.	California burclover	I
<i>Vicia ludoviciana</i> Nutt. var. <i>ludoviciana</i>	deerpea vetch	N
GROSSULARIACEAE	GOOSEBERRY FAMILY	
<i>Ribes indecorum</i> Eastw.	white flowering currant	N
<i>Ribes malvaceum</i> Sm.	chaparral current	N
<i>Ribes speciosum</i> Pursh	fuchsia-flowered gooseberry	N
LAMIACEAE	MINT FAMILY	
<i>Lepechinia ganderi</i> Epling	Gander's pitcher sage	N
<i>Salvia munzii</i> Epling	Munz's sage	N
LYTHRACEAE	LOOSESTRIFE FAMILY	
<i>Lythrum californicum</i> Torr. & A. Gray	California loose-strife	N
<i>Lythrum hyssopifolia</i> L.	grass poly, hyssop loosestrife	I
MYRSINACEAE		
<i>Anagallis arvensis</i> L.	scarlet pimpernel, poor-man's weatherglass	I

TABLE 14
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH - SAN YSIDRO
(continued)

Scientific Name	Common Name	Origin
ONAGRACEAE	EVENING-PRIMROSE FAMILY	
<i>Clarkia epilobioides</i> (Nutt. ex Torr. & A. Gray) A. Nelson & J.F. Macbr.	willow herb clarkia, canyon clarkia	N
OROBANCHACEAE	BROOM-RAPE FAMILY	
<i>Orobanche bulbosa</i> G. Beck	broom-rape	N
PAPAVERACEAE	POPPY FAMILY	
<i>Dendromecon rigida</i> Benth.	bush poppy	N
<i>Ehrendorferia</i> [= <i>Dicentra</i>] <i>chrysantha</i> (Hook. & Arn.) Rylander	golden ear-drops	N
PHRYMACEAE [=SCROPHULARIACEAE]	HOPSEED FAMILY	
<i>Mimulus guttatus</i> DC.	common monkey-flower	N
PLANTAGINACEAE	PLANTAIN FAMILY	
<i>Plantago erecta</i> E. Morris	dot-seed plantain	N
<i>Penstemon spectabilis</i> Thurb. ex A. Gray	violet beard-tongue	N
<i>Stemodia durantifolia</i> (L.) Sw.	blue streamwort	N
POLYGONACEAE	BUCKWHEAT FAMILY	
<i>Rumex salicifolius</i> Weinm.	willow dock	N
RANUNCULACEAE	BUTTERCUP FAMILY	
<i>Thalictrum fendleri</i> Engelm. ex A. Gray	meadow-rue	N
RHAMNACEAE	BUCKTHORN FAMILY	
<i>Ceanothus otayensis</i> McMinn.	Otay-lilac	N
ROSACEAE	ROSE FAMILY	
<i>Potentilla</i> sp.	cinquefoil	N
SAXIFRAGACEAE	SAXIFRAGE FAMILY	
<i>Jepsonia parryi</i> (Torr.) Small	mesa saxifrage	N
SCROPHULARIACEAE	FIGWORT FAMILY	
<i>Cordylanthus rigidus</i> (Benth.) Jeps. ssp. <i>setigerus</i> T.I. Chuang & Heckard	thread-leaved bird's-beak	N
SIMMONDSIACEAE	JOJOBA FAMILY	
<i>Simmondsia chinensis</i> (Link) C.K. Schneid.	jojoba, goat nut	N
SOLANACEAE	NIGHTSHADE FAMILY	
<i>Solanum xanti</i> [= <i>tenuilobatum</i>] A. Gray	chaparral nightshade	N

TABLE 14
PREVIOUSLY UNDOCUMENTED PLANT SPECIES OBSERVED AT OTAY RANCH - SAN YSIDRO
(continued)

Scientific Name	Common Name	Origin
VIOLACEAE	VIOLET FAMILY	
<i>Viola pedunculata</i> Torr. & A. Gray	johnny-jump-up	N
AGAVACEAE	AGAVE FAMILY	
<i>Chlorogalum parviflorum</i> S. Watson	smallflower soap plant	N
CYPERACEAE	SEDGE FAMILY	
<i>Carex spissa</i> L.H. Bailey	San Diego sedge	N
<i>Eleocharis</i> sp.	spike-rush	N
JUNCACEAE	RUSH FAMILY	
<i>Juncus bufonius</i> L.	toad rush	N
LILIACEAE	LILY FAMILY	
<i>Allium praecox</i> Brandegee	common wild onion	N
<i>Fritillaria biflora</i> Lindl.	chocolate lily, mission bells	N
<i>Lilium humboldtii</i> Roezl & Leichtlin ssp. <i>ocellatum</i> (Kellogg) Thorne	ocellated lily	N
ORCHIDACEAE	ORCHID FAMILY	
<i>Piperia cooperi</i> (S. Watson) Rydb.	chaparral rein-orchid, Cooper's rein orchid	N
POACEAE (GRAMINEAE)	GRASS FAMILY	
<i>Achnatherum diegoense</i> (Swallen) Barkworth	San Diego County needle grass	N
<i>Bothriochloa barbinodis</i> (Lag.) Herter	cane bluestem	N
<i>Bromus sterilis</i> L.	poverty brome	I
<i>Lamarckia aurea</i> (L.) Moench	goldentop	I
<i>Piptatherum [=Oryzopsis] miliaceum</i> (L.) Coss.	smilo grass	I
THEMIDACEAE	BRODIAEA FAMILY	
<i>Bloomeria crocea</i> (Torr.) Coville	common goldenstar	N

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

ORIGIN

N = Native to locality

I = Introduced species from outside locality

TABLE 15
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SAN YSIDRO

Scientific Name	Common Name
REPTILES	
IGUANIDAE	IGUANID LIZARDS
<i>Sceloporus orcutti</i>	granite spiny lizard
<i>Uta stansburiana</i>	common side-blotched lizard
TEIIDAE	WHIPTAIL LIZARDS
<i>Aspidoscelis hyperythra beldingi</i>	Belding's orange-throated whiptail
BOIDAE	BOAS
<i>Lichanura trivirgata roseofusca</i>	coastal rosy boa
CROTALIDAE	RATTLESNAKES
<i>Crotalus ruber</i>	red diamond rattlesnake
<i>Crotalus mitchellii pyrrhus</i>	southwestern speckled rattlesnake
<i>Crotalus viridis helleri</i>	southern Pacific rattlesnake
ODONTOPHORIDAE	NEW WORLD QUAIL
<i>Callipepla californica californica</i>	California quail
CATHARTIDAE	NEW WORLD VULTURES
<i>Cathartes aura</i>	turkey vulture
COLUMBIDAE	PIGEONS & DOVES
<i>Zenaida macroura marginella</i>	mourning dove
TYTONIDAE	BARN OWLS
<i>Tyto alba pratincola</i>	common barn owl
CAPRIMULGIDAE	GOATSUCKERS
<i>Phalaenoptilus nuttallii</i>	common poorwill
APODIDAE	SWIFTS
<i>Aeronautes saxatalis</i>	white-throated swift
TROCHILIDAE	HUMMINGBIRDS
<i>Calypte anna</i>	Anna's hummingbird
<i>Calypte costae</i>	Costa's hummingbird
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Contopus sordidulus</i>	western wood pewee
<i>Myiarchus cinerascens cinerascens</i>	ash-throated flycatcher
<i>Tyrannus vociferans vociferans</i>	Cassin's kingbird
CORVIDAE	CROWS, JAYS, & MAGPIES
<i>Aphelocoma californica</i>	western scrub-jay
<i>Corvus brachyrhynchos hesperis</i>	American crow
<i>Corvus corax clarionensis</i>	common raven
ALAUDIDAE	LARKS
<i>Eremophila alpestris</i>	horned lark
HIRUNDINIDAE	SWALLOWS
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow
AEGITHALIDAE	BUSHTIT
<i>Psaltriparus minimus minimus</i>	bushtit

TABLE 15
WILDLIFE SPECIES OBSERVED/DETECTED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name
TROGLODYTIDAE	WRENS
<i>Salpinctes obsoletus obsoletus</i>	rock wren
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Troglodytes aedon parkmanii</i>	house wren
SYLVIIDAE	GNATCATCHERS
<i>Polioptila californica californica</i>	coastal California gnatcatcher
TURDIDAE	THRUSHES
<i>Sialia mexicana occidentalis</i>	western bluebird
TIMALIIDAE	BABBLERS
<i>Chamaea fasciata henshawi</i>	wrentit
MIMIDAE	MOCKINGBIRDS & THRASHERS
<i>Mimus polyglottos polyglottos</i>	northern mockingbird
<i>Toxostoma redivivum redivivum</i>	California thrasher
PTILOGONATIDAE	SILKY FLYCATCHERS
<i>Phainopepla nitens lepida</i>	phainopepla
PARULIDAE	WOOD WARBLERS
<i>Geothlypis trichas</i>	common yellowthroat
<i>Wilsonia pusilla</i>	Wilson's warbler
EMBERIZIDAE	EMBERIZIDS
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow
<i>Chondestes grammacus strigatus</i>	lark sparrow
<i>Melospiza melodia</i>	song sparrow
<i>Pipilo crissalis</i>	California towhee
<i>Pipilo maculatus</i>	spotted towhee
CARDINALIDAE	CARDINALS & GROSBEAKS
<i>Passerina caerulea salicaria</i>	blue grosbeak
<i>Passerina amoena</i>	lazuli bunting
ICTERIDAE	BLACKBIRDS & NEW WORLD ORIOLES
<i>Sturnella neglecta</i>	western meadowlark
FRINGILLIDAE	FINCHES
<i>Carduelis psaltria hesperophilus</i>	lesser goldfinch
<i>Carpodacus mexicanus frontalis</i>	house finch
MAMMALS	
LEPORIDAE	RABBITS & HARES
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit
MURIDAE	OLD WORLD MICE & RATS (I)
<i>Neotoma sp.</i>	woodrat
CERVIDAE	DEER
<i>Odocoileus hemionus</i>	mule deer

(I) = Introduced species

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
FERNS					
ASPLENIACEAE	SPLEENWORT FAMILY				
<i>Asplenium vespertinum</i> western spleenwort	–/–	4	–	Perennial herb; chaparral, cismontane woodland, coastal sage scrub; rocky habitat; blooms Feb.–June; elevation 500–3,000 feet.	One individual western spleenwort was observed in the southeastern corner of San Ysidro. Western spleenwort is a previously undocumented species at San Ysidro.
OPHIOGLOSSACEAE	ADDER’S TONGUE FAMILY				
<i>Ophioglossum californicum</i> California adder’s-tongue	–/–	4	–	Perennial herb; chaparral, vernal pools, valley and foothill grasslands; blooms Dec.–May; elevation 200–1,000 feet.	Less than 10 individuals of California adder’s-tongue were mapped in the northeastern corner of San Ysidro. California adder’s-tongue is a previously undocumented species at San Ysidro.
GYMNOSPERMS					
CUPRESSACEAE	CYPRESS FAMILY				
<i>Hesperocyparis forbesii</i> Tecate cypress	–/–	1B	MSCP	Evergreen tree; closed-cone coniferous forest, chaparral; Otay Mountain; elevation 700–5,000 feet.	Six additional populations of Tecate cypress were mapped at San Ysidro. In addition, hundreds of individuals were mapped in the southeastern corner of the site. Fifty individuals had been previously mapped at this location.

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
ANGIOSPERMS: DICOTS					
ASTERACEAE	SUNFLOWER FAMILY				
<i>Isocoma menziesii</i> var. <i>menziesii</i> [=var. <i>decumbens</i>] decumbent goldenbush	–/–	1B	–	Shrub; chaparral, coastal sage scrub, sandy soils, often in disturbed areas; blooms April–Nov.; elevation less than 500 feet.	Hundreds of individuals of decumbent goldenbush occur throughout the coastal sage scrub at San Ysidro. Decumbent goldenbush is a previously undocumented species at San Ysidro.
<i>Pentachaeta aurea</i> golden-rayed pentachaeta	–/–	4	–	Annual herb; cismontane woodland, coastal sage scrub, lower montane coniferous forest, perennial grasslands, blooms March–July; elevation 300–6,100 feet.	Less than 100 individuals of golden-rayed pentachaeta were mapped in the northeastern corner of San Ysidro. Golden-rayed pentachaeta is a previously undocumented species at San Ysidro.
CONVOLVULACEAE	MORNING-GLORY FAMILY				
<i>Convolvulus simulans</i> small-flowered morning glory	–/–	4	–	Annual herb; openings in chaparral, coastal sage scrub, valley and foothill grassland, clay substrate; blooms March–July; elevation less than 2,300 feet.	Less than 100 individuals of small-flowered morning glory were mapped within a clay lens at San Ysidro. Small-flowered morning glory is a previously undocumented species at San Ysidro.
<i>Dichondra occidentalis</i> western dichondra	–/–	4	–	Perennial herb; chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland; blooms Mar.–July; elevation less than 1,650 feet.	Western dichondra occurs in much of the coastal sage scrub at San Ysidro. Individuals total in the hundreds.

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
CRASSULACEAE					
					STONECROP FAMILY
<i>Dudleya variegata</i> variegated dudleya	–/–	1B	NE, MSCP	Perennial herb; openings in chaparral, coastal sage scrub, grasslands, vernal pools; blooms May–June; elevation less than 2,000 feet.	Two populations of variegated dudleya totaling less than 100 were mapped centrally and in the northeastern corner of the site along a road cut. Variegated dudleya is a previously undocumented species at San Ysidro.
ERICACEAE					
					HEATH FAMILY
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> summer holly	–/–	1B	–	Evergreen shrub; chaparral; blooms April–June; elevation less than 1,800 feet.	Less than 100 individuals of summer holly were mapped at two locations. Summer holly is a previously undocumented species at San Ysidro.
FABACEAE					
					LEGUME FAMILY
<i>Lotus crassifolius</i> var. <i>otayensis</i> Otay Mountain lotus	–/–	1B	–	Perennial herb; chaparral, metavolcanic substrate, often in disturbed areas; blooms May–Aug.; elevation 3,000–3,300 feet. Known only from Otay Mountain and one occurrence in Baja California.	Five locations of Otay Mountain lotus were mapped at San Ysidro. There are less than 20 individuals mapped. Otay Mountain lotus is a previously undocumented species at San Ysidro.

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
LAMIACEAE					
					MINT FAMILY
<i>Lepechinia ganderi</i> Gander's pitcher sage	--	1B	MSCP	Shrub; closed-cone coniferous forest, chaparral, coastal sage scrub, valley and foothill grassland, blooms June–July; elevation 1,000–3,500 feet. Known in California from fewer than 10 occurrences.	Gander's pitcher sage was mapped in the southeastern corner of the site. There are hundreds of individuals along the mapped slopes. Gander's pitcher sage is a previously undocumented species at San Ysidro.
<i>Salvia munzii</i> Munz's sage	--	2	–	Evergreen shrub; chaparral, coastal sage scrub, blooms Feb.–April; elevation less than 3,500 feet.	Two locations of Munz's sage were mapped at San Ysidro. There are less than 100 individuals at these locations.
RHAMNACEAE					
					BUCKTHORN FAMILY
<i>Ceanothus otayensis</i> Otay Mountain ceanothus	--	1B	–	Evergreen shrub; chaparral, metavolcanic or gabbroic; blooms Jan.–April; elevation 2,000–3,600 feet. Known only from the San Miguel and Otay Mountains.	Otay Mountain ceanothus was mapped in the southeastern corner of San Ysidro. Less than 10 individuals were mapped. Otay Mountain ceanothus is a previously undocumented species at San Ysidro.

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
ANGIOSPERMS: MONOCOTS					
LILIACEAE	LILY FAMILY				
<i>Calochortus dunnii</i> Dunn's mariposa lily	CR/-	1B	MSCP	Perennial herb (bulbiferous); closed-cone coniferous forest, chaparral, gabbroic or metavolcanic, rocky substrate; blooms April-June; elevation 1,200-6,000 feet.	Additional locations of Dunn's mariposa lily were mapped in the southeastern corner of San Ysidro. Additional individuals were mapped at a previously mapped location along the southern central boundary.
<i>Lilium humboldtii</i> spp. <i>ocellatum</i> ocellated lily	-/-	4	-	Perennial herb (bulbiferous); chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, riparian woodland; blooms March-July; elevation less than 6,000 feet.	One individual of Ocellated lily was mapped within the northeastern drainage at San Ysidro. Ocellated lily is a previously undocumented species at San Ysidro.
ORCHIDACEAE	ORCHID FAMILY				
<i>Piperia cooperi</i> chaparral rein-orchid	-/-	4	-	Perennial herb; chaparral, cismontane woodland, perennial grassland; blooms March to June; elevation less than 5,200 feet.	Ten individuals of chaparral rein-orchid were mapped at San Ysidro. Chaparral rein-orchid is a previously undocumented species at San Ysidro.

TABLE 16
SENSITIVE PLANT SPECIES
OBSERVED AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
POACEAE GRASS FAMILY					
<i>Achnatherum diegoense</i> San Diego County needle grass	–/–	4	–	Perennial herb; rocky soils, chaparral, coastal sage scrub, often near streams; blooms Feb.–June; elevation less than 2,300 feet.	San Diego County needle grass is common within the coastal sage scrub at San Ysidro. Therefore, not all locations were mapped. San Diego County needle grass is a previously undocumented species at San Ysidro.
THEMIDACEAE					
<i>Muilla clevelandii</i> San Diego goldenstar	–/–	1B	MSCP	Perennial herb (bulbiferous); chaparral, coastal sage scrub, valley and foothill grassland, vernal pools, clay soils; blooms May; elevation 170–1,500 feet.	San Diego goldenstar was mapped at three additional locations at San Ysidro. There are thousands of individuals.

STATE LISTED PLANTS

CR = State listed rare

CALIFORNIA NATIVE PLANT SOCIETY LISTS

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.

4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

CITY OF Chula Vista

NE = Narrow endemic

MSCP = Multiple Species Conservation Program covered species

TABLE 17
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
BIRDS (Nomenclature from American Ornithologists' Union 1998 and Unitt 2004)				
ODONTOPHORIDAE	NEW WORLD QUAIL			
<i>Callipepla californica californica</i>	California quail	CSS	C / Y	O, V
CATHARTIDAE	NEW WORLD VULTURES			
<i>Cathartes aura</i>	turkey vulture	F	C / M, S	O
COLUMBIDAE	PIGEONS & DOVES			
<i>Zenaida macroura marginella</i>	mourning dove	CSS	C / Y	O, V
APODIDAE	SWIFTS			
<i>Aeronautes saxatalis</i>	white-throated swift	F	C / Y	O, V
TROCHILIDAE	HUMMINGBIRDS			
<i>Calypte costae</i>	Costa's hummingbird	CSS	F / S	O, V
TYRANNIDAE	TYRANT FLYCATCHERS			
<i>Contopus sordidulus</i>	western wood-pewee	RW	F / S	O, V
<i>Myiarchus cinerascens cinerascens</i>	ash-throated flycatcher	CSS	C / S	O, V
<i>Tyrannus vociferans vociferans</i>	Cassin's kingbird	CSS	C / Y	O, V
CORVIDAE	CROWS, JAYS, & MAGPIES			
<i>Corvus brachyrhynchos hesperis</i>	American crow	F	C / Y	O, V
<i>Corvus corax clarionensis</i>	common raven	F	C / Y	O, V
ALAUDIDAE	LARKS			
<i>Eremophila alpestris</i>	horned lark	CSS	C / Y	O, V
HIRUNDINIDAE	SWALLOWS			
<i>Petrochelidon pyrrhonota tachina</i>	cliff swallow	F	C / S	O, V
AEGITHALIDAE	BUSHTIT			
<i>Psaltriparus minimus minimus</i>	bushtit	CSS	C / Y	O, V
TROGLODYTIDAE	WRENS			
<i>Thryomanes bewickii</i>	Bewick's wren	CSS	C / Y	O, V

TABLE 17
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
<i>Troglodytes aedon parkmanii</i>	house wren	CSS, RW	C / Y	O, V
SYLVIIDAE	GNATCATCHERS			
<i>Polioptila californica californica</i>	coastal California gnatcatcher	CSS	C / Y	O, V
TURDIDAE	THRUSHES			
<i>Sialia mexicana occidentalis</i>	western bluebird	CSS, RW	F / W	O
TIMALIIDAE	BABBLERS			
<i>Chamaea fasciata henshawi</i>	wrentit	CSS	C / Y	O, V
MIMIDAE	MOCKINGBIRDS & THRASHERS			
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	CSS, RW	C / Y	O, V
<i>Toxostoma redivivum redivivum</i>	California thrasher	CSS	F / Y	O, V
PTILOGONATIDAE	SILKY FLYCATCHERS			
<i>Phainopepla nitens lepida</i>	phainopepla	CSS	C / Y	O
PARULIDAE	WOOD WARBLERS			
<i>Geothlypis trichas</i>	common yellowthroat	RW	C / Y	O, V
<i>Wilsonia pusilla</i>	Wilson's warbler	RW	U / M	O
EMBERIZIDAE	EMBERIZIDS			
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	CSS	C / Y	O, V
<i>Chondestes grammacus strigatus</i>	lark sparrow	CSS	F / Y	O, V
<i>Melospiza melodia</i>	song sparrow	CSS	C / Y	O, V
<i>Pipilo crissalis</i>	California towhee	CSS	C / Y	O, V
<i>Pipilo maculatus</i>	spotted towhee	CSS, RW	C / Y	O, V
CARDINALIDAE	CARDINALS & GROSBEAKS			
<i>Passerina amoena</i>	lazuli bunting	CSS	F / C	O, V
ICTERIDAE	BLACKBIRDS & NEW WORLD ORIOLES			
<i>Sturnella neglecta</i>	western meadowlark	CSS	F / Y	O, V

TABLE 17
WILDLIFE SPECIES OBSERVED/DETECTED DURING THE COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name	Occupied Habitat	On-site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
FRINGILLIDAE	FINCHES			
<i>Carduelis psaltria hesperophilus</i>	lesser goldfinch	CSS	C / Y	O, V
<i>Carpodacus mexicanus frontalis</i>	house finch	CSS	C / Y	O, V

HABITATS

CSS = Coastal sage scrub, inland sage scrub
F = Flying overhead
RW = Riparian 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)

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

EVIDENCE OF OCCURRENCE

O = Observed
V = Vocalization

TABLE 18
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO

Scientific Name	Common Name	Count						Seasonality
		4/27 D	5/17 D	6/23 D	4/19 N	5/19 N	6/21 N	
Point Count Location #1 – Coastal Sage Scrub, Annual Grassland/Disturbed Coastal Sage Scrub								
Point Count Survey Conducted During these Times		10:11A- 10:21A	6:26A- 6:36A	11:31A- 11:41A	8:28P- 8:38P	11:20P- 11:30P	10:15A- 10:25A	
TYTONIDAE <i>Tyto alba pratincola</i>	BARN OWLS common barn owl	-	-	-	-	1	-	Y
APODIDAE <i>Aeronautes saxatalis</i>	SWIFTS white-throated swift	-	4	-	-	-	-	Y
TROCHILIDAE <i>Calypte anna</i>	HUMMINGBIRDS Anna's hummingbird	-	-	1	-	-	-	Y
TYRANNIDAE <i>Tyrannus vociferans vociferans</i>	TYRANT FLYCATCHERS Cassin's kingbird	1	-	-	-	-	-	Y
CORVIDAE <i>Aphelocoma californica</i>	CROWS, JAYS, & MAGPIES western scrub-jay	1	-	-	-	-	-	Y
ALAUDIDAE <i>Eremophila alpestris</i>	LARKS horned lark	2	-	-	-	-	-	Y
MIMIDAE <i>Mimus polyglottos polyglottos</i>	MOCKINGBIRDS & THRASHERS northern mockingbird	1	-	-	-	-	-	Y
EMBERIZIDAE <i>Aimophila ruficeps canescens</i>	EMBERIZIDS southern California rufous-crowned sparrow	-	1	-	-	-	-	Y
<i>Pipilo crissalis</i>	California towhee	-	1	-	-	-	-	Y

TABLE 18
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/27 D	5/17 D	6/23 D	4/19 N	5/19 N	6/21 N	
CARDINALIDAE <i>Passerina caerulea salicaria</i>	CARDINALS & GROSBEAKS blue grosbeak	-	-	1	-	-	-	S
Point Count Location #2 – Coastal Sage Scrub, Disturbed Chamise Chaparral, Annual Grassland/Disturbed Coastal Sage Scrub								
	Point Count Survey Conducted During these Times	10:50A- 11:00A	7:11A- 7:21A	10:51A- 11:01A	7:44P- 7:54P	11:56P- 12:06A	9:35P- 9:45P	
CAPRIMULGIDAE <i>Phalaenoptilus nuttallii</i>	GOATSUCKERS common poorwill	-	-	-	1	-	-	Y
CORVIDAE <i>Corvus brachyrhynchos hesperis</i>	CROWS, JAYS, & MAGPIES American crow	1	-	-	-	-	-	Y
MIMIDAE <i>Mimus polyglottos polyglottos</i>	MOCKINGBIRDS & THRASHERS northern mockingbird	2	-	-	-	-	-	Y
EMBERIZIDAE <i>Pipilo crissalis</i>	EMBERIZIDS California towhee	2	1	-	-	-	-	Y
ICTERIDAE <i>Sturnella neglecta</i>	BLACKBIRDS & NEW WORLD ORIOLES western meadowlark	1	-	-	-	-	-	Y
FRINGILLIDAE <i>Carduelis psaltria hesperophilus</i>	FINCHES lesser goldfinch	-	-	1	-	-	-	Y

TABLE 18
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/27 D	5/17 D	6/23 D	4/19 N	5/19 N	6/21 N	
Point Count Location #3 – Annual Grassland/Disturbed Southern Mixed Chaparral								
Point Count Survey Conducted During these Times		11:45A- 1155A	8:00A- 8:10A	9:35A- 9:45A	9:11P- 9:21P	12:42A- 15:52A	8:52P- 9:02P	
ALAUDIDAE	LARKS							
<i>Eremophila alpestris</i>	horned lark	-	1	-	-	-	-	Y
TROGLODYTIDAE	WRENS							
<i>Salpinctes obsoletus obsoletus</i>	rock wren	-	1	1	-	-	-	Y
EMBERIZIDAE	EMBERIZIDS							
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	1	1	-	-	-	-	Y
<i>Chondestes grammacus strigatus</i>	lark sparrow	-	-	1	-	-	-	Y
<i>Melospiza melodia</i>	song sparrow							Y
<i>Pipilo crissalis</i>	California towhee	-	-	1	-	-	-	Y
Point Count Location #4 – Annual Grassland/Disturbed Southern Mixed Chaparral, Annual Grassland/Disturbed Coastal Sage Scrub								
Point Count Survey Conducted During these Times		12:06P- 12:16P	8:21A- 8:31A	9:56A- 10:06A	9:35P- 9:45P	1:01A- 1:11A	8:32P- 8:42P	
ODONTOPHORIDAE	NEW WORLD QUAIL							
<i>Callipepla californica californica</i>	California quail	1	-	-	-	-	-	Y
TROCHILIDAE	HUMMINGBIRDS							
<i>Calypte anna</i>	Anna's hummingbird	-	-	1	-	-	-	Y
ALAUDIDAE	LARKS							
<i>Eremophila alpestris</i>	horned lark	-	2	-	-	-	-	Y

TABLE 18
BIRD SPECIES OBSERVED/DETECTED ON THE AVIAN POINT COUNT SURVEYS
AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

Scientific Name	Common Name	Count						Seasonality
		4/27 D	5/17 D	6/23 D	4/19 N	5/19 N	6/21 N	
MIMIDAE	MOCKINGBIRDS & THRASHERS							
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	-	1	-	-	-	-	Y
EMBERIZIDAE	EMBERIZIDS							
<i>Chondestes grammacus strigatus</i>	lark sparrow	2	-	-	-	-	-	Y
<i>Pipilo crissalis</i>	California towhee	2	-	-	-	-	-	Y
ICTERIDAE	BLACKBIRDS & NEW WORLD ORIOLES							
<i>Sturnella neglecta</i>	western meadowlark	-	1	-	-	-	-	Y

Habitats determined from Dudek 2009

D= Diurnal survey, N = Nocturnal survey. Nomenclature used is from American Ornithologists' Union 1998 and Unitt 2004.

SEASONALITY

S = Spring/summer resident; probable breeder on-site or in vicinity

Y = Year-round resident; probable breeder on-site or in vicinity

TABLE 19
SENSITIVE WILDLIFE SPECIES OCCURRING AT OTAY RANCH PRESERVE – SAN YSIDRO

Species	Status	Habitat	Occurrence/ Comments
REPTILES			
TEIIDAE WHIPTAIL LIZARDS			
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	CSC, MSCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	O
BOIDAE BOAS			
Coastal rosy boa <i>Lichanura trivirgata roseofusca</i>	FSC, *	Coastal sage scrub, chaparral in inland and desert locales with rocky soils.	O
CROTALIDAE RATTLESNAKES			
Red diamond rattlesnake <i>Crotalus ruber</i>	CSC	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.	O
BIRDS			
SYLVIIDAE GNATCATCHERS			
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, CSC, MSCP	Coastal sage scrub, maritime succulent scrub. Resident.	O, V
EMBERIZIDAE EMBERIZIDS			
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	CSC, MSCP	Coastal sage scrub, chaparral, grassland. Resident.	O, V
MAMMALS			
LEPORIDAE RABBITS & HARES			
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	CSC	Open areas of scrub, grasslands, agricultural fields.	O

TABLE 19
SENSITIVE WILDLIFE SPECIES OCCURRING AT OTAY RANCH PRESERVE – SAN YSIDRO
(continued)

STATUS CODES

Listed/Proposed

FT = Listed as threatened by the federal government

Other

CSC = California Department of Fish and Game species of special concern

MSCP = Multiple Species Conservation Program covered species

* = Taxa listed with an asterisk fall into one or more of the following categories:

- Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range
- Population(s) in California that may be peripheral to the major portion of a taxon's range but which are threatened with extirpation within California
- Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands)

EVIDENCE OF OCCURRENCE

O = Observed

V = Vocalization

ATTACHMENT 3

TABLE 20
2009-10 COST BREAKDOWN BY TASK FOR OTAY RANCH PRESERVE
SALT CREEK AND SAN YSIDRO

Task	Cost
Reconnaissance Site Visits	\$16,700
Photographic Monitoring	\$7,000
Rare Plant Surveys	\$9,100
Invasive Plant Surveys/Treatment	\$5,800
CAGN	\$22,600
CACW	\$4,300
Avian Point Count	\$12,700
QCB	\$3,000
Meetings and Coordination with POM & Land Managers	\$10,000
In House Meetings & Management	\$4,800
Work Plan & RMP	\$14,200
Approximate Total	\$110,200