2010–11 Baseline Survey Report for the Dulzura Parcels of the the Otay Ranch Preserve

Prepared for

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January 3, 2011

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1.0 Executive Summary

This baseline biological resource report has been prepared for the Dulzura parcels of the Otay Ranch Preserve, Assessor's Parcel Numbers 598-160-14, 647-050-04, 598-170-40, and 647-060-01. The Otay Ranch Preserve is located in an unincorporated portion of southwestern San Diego County, east of the city of Chula Vista.

RECON biologists conducted surveys to gather baseline biological information at the Dulzura parcels during the spring and summer of 2011. The surveys consisted of vegetation mapping and general plant and wildlife surveys. Sensitive species were observed incidentally, and suitable habitat for sensitive wildlife species was also evaluated during general surveys.

Twelve vegetation communities were mapped in the Dulzura parcels during baseline surveys. Of these, 4 vegetation communities are considered Tier I Uncommon Uplands by the City of Chula Vista's Multiple Species Conservation Program Subarea Plan (MSCP). Within these vegetation communities, a total of 180 native plant species and 41 non-native plant species were observed. 20 of the native plant species are considered sensitive. Wildlife observed includes 25 invertebrate species, 1 amphibian species, 7 reptile species, 71 bird species, and 4 mammal species. Of these, 1 invertebrate species, 3 reptile species, 4 bird species, and 1 mammal species are considered sensitive.

The baseline data gathered during these surveys will be used to guide future prioritization of preserve management actions. Future focused surveys for Quino checkerspot butterfly (*Euphydryas editha quino*), as well as permanent photo point monitoring, have been recommended as tasks for FY 2011-12 in the Draft FY 2011-12 Annual Work Plan for Conveyed Lands Managed by the Otay Ranch Preserve Owner/Manager.

2.0 Introduction

This baseline biological resources report has been prepared for the City of Chula Vista to be used in support of the Otay Ranch Resource Management Plan. The Otay Ranch Preserve (Preserve) is currently composed of seven parcel sets: Dulzura, Jamul Mountains, Little Cedar Canyon, McMillin, Northern San Ysidro, Salt Creek, and San Ysidro. This baseline biological resource report has been prepared for the Dulzura parcels which encompass approximately 801 acres in Assessor's Parcel Numbers (APN) 598-160-14, 647-050-04, 598-170-40, and 647-060-01.

The city of Chula Vista is located in southwestern San Diego County, which is in southern California near the U.S.-Mexico border. The Dulzura parcels are located in an unincorporated portion of the County, east of Chula Vista, southeast of Otay Lakes Road, and west of State Route 94 (Figure 1).

Two main canyons are present in the Dulzura parcels: Little Cedar Canyon and Cedar Canyon (Figures 2 and 3). These canyons and their associated drainages convey water to Jamul Creek and Dulzura Creek, respectively, and are part of the Otay River watershed. The Dulzura parcels are located in the San Ysidro Mountains, which are a part of the Peninsular Ranges in California. The San Ysidro Mountains have been known historically to support a variety of species and habitats, many of which are considered to be endemic to the region or sensitive in California.

The 2003 Otay/Mine fire and 2007 Harris fire burned portions of the San Ysidro Mountains. The Otay/Mine fire burned all four of the Dulzura parcels. The Harris fire completely burned APN 598-160-14, 647-050-04, and 598-170-40, and partially burned APN 647-060-01 (Figure 4).

RECON biologists conducted surveys to gather baseline biological information at the Dulzura parcels during the spring and summer of 2011. The surveys consisted of vegetation mapping and general plant and wildlife surveys. Sensitive species that were observed incidentally during general plant and wildlife surveys were mapped using a global positioning system (GPS). Suitable habitat for sensitive wildlife species such as Quino checkerspot butterfly and coastal California gnatcatcher (*Polioptila californica californica*) was also evaluated for future focused surveys. Recommendations for the types of focused surveys to be conducted in the future are discussed in Section 5.1. The baseline data gathered during these surveys will be used to guide future prioritization of preserve management actions.

3.0 Survey Methods

3.1 Literature and Database Review

Prior to conducting the surveys, literature and databases were reviewed from various resources, including the California Natural Diversity Database (CNDDB), the Consortium of California Herbaria, San Diego County Department of Planning and Land Use vegetation maps, and previous biological surveys conducted by RECON, in an effort to utilize varying sources of historical data on the flora and fauna present or within the nearby vicinity the parcels. Species sensitivity were determined using the California Native Plant Society's (CNPS) *Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2011), California Department of Fish and Game's (CDFG) *Special*

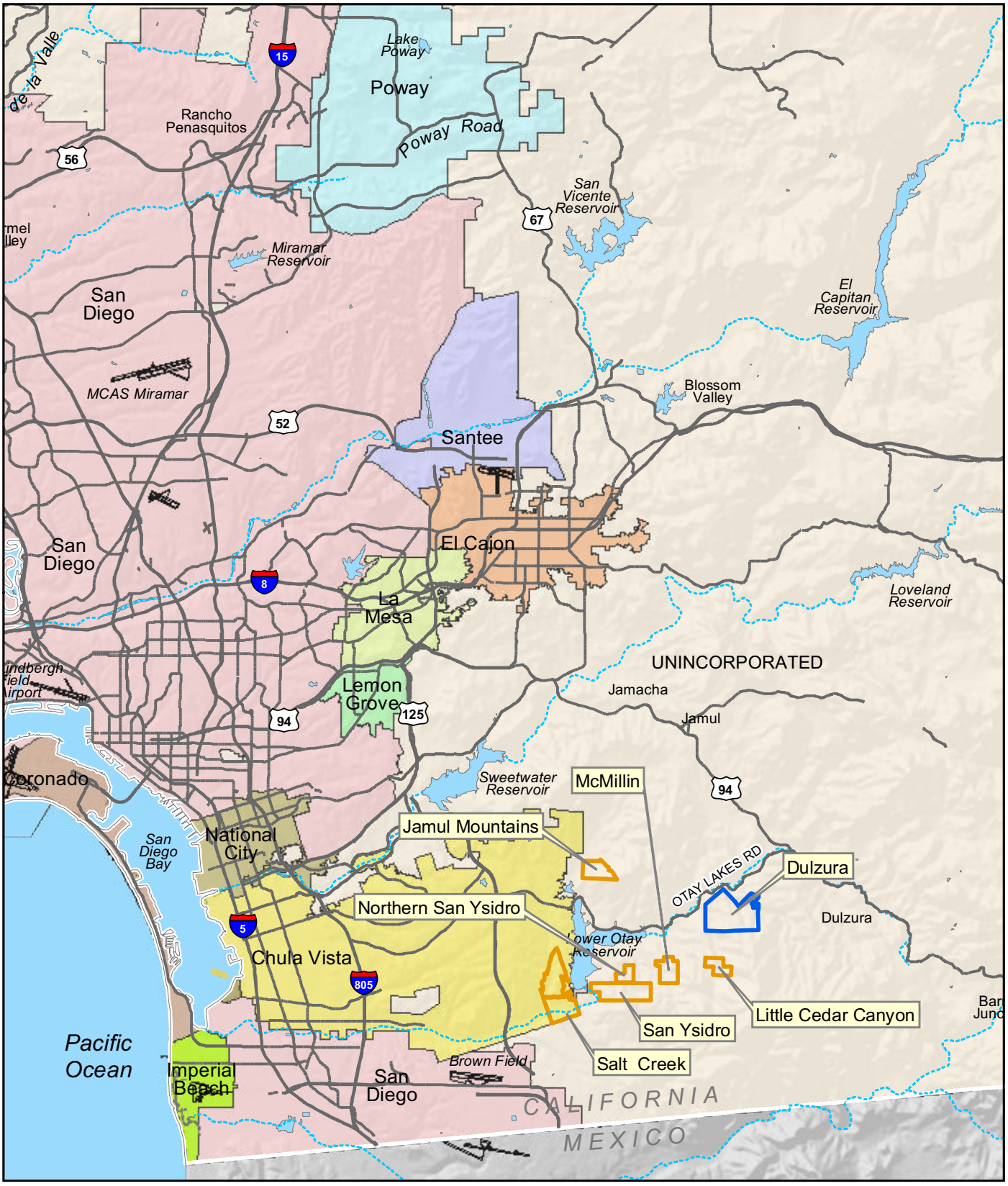

FIGURE 1

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Otay Ranch Preserve Regional Location

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Map Source: USGS 7.5 minute topographic map series, DULZURA, JAMUL MOUNTAINS, OTAY MESA & OTAY MOUNTAIN quadrangles.

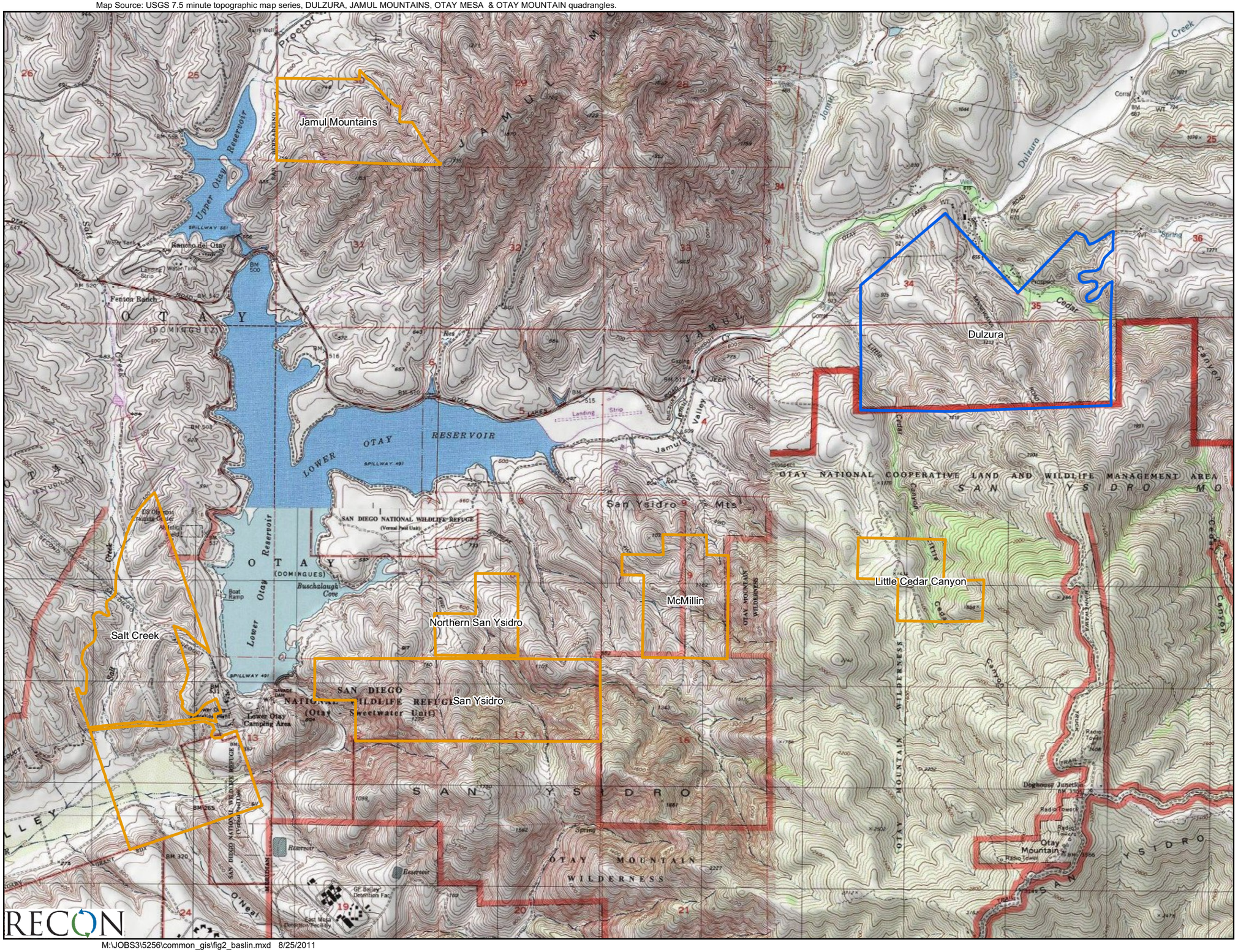

FIGURE 2

Project Location on USGS Map

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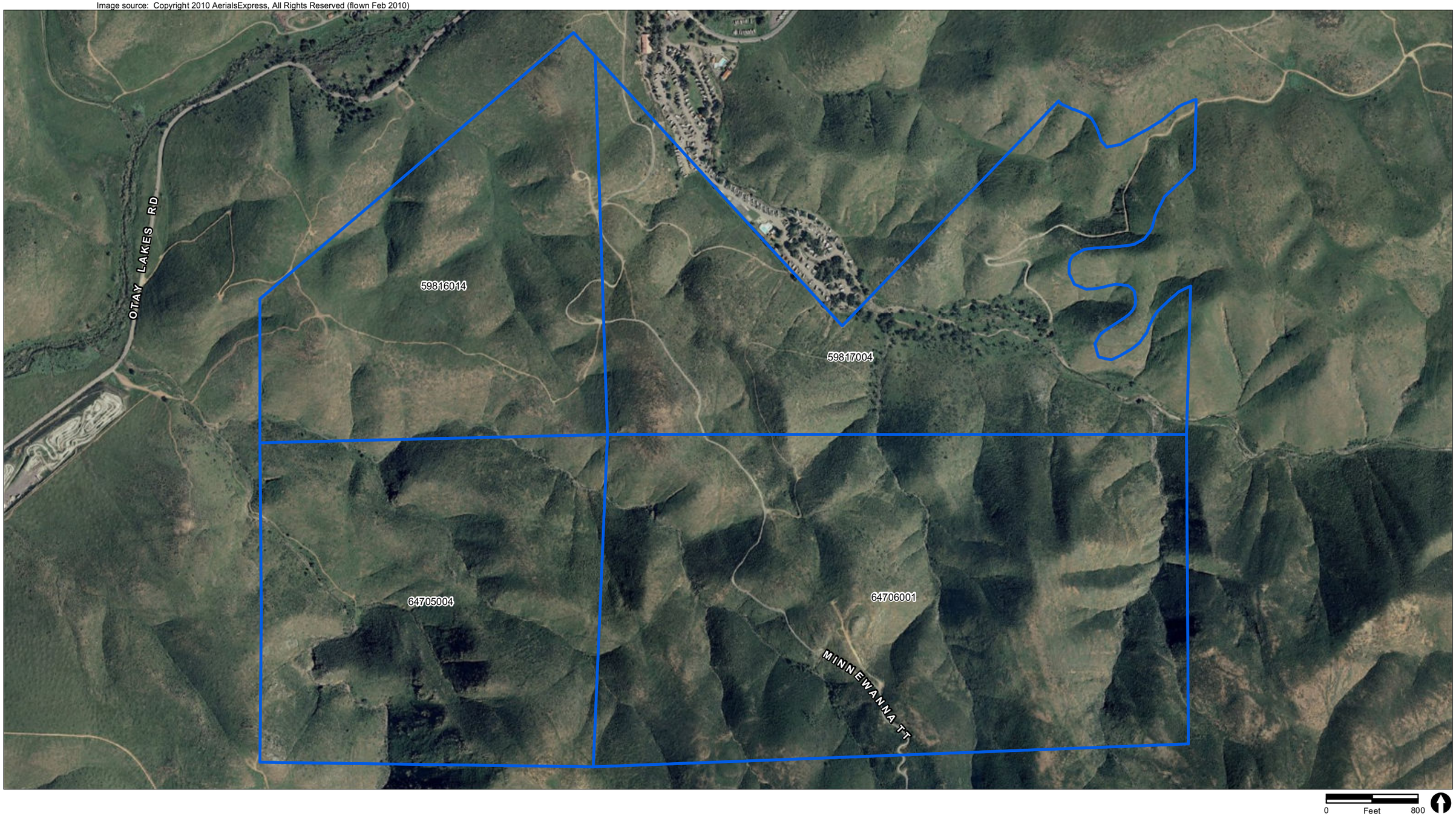

Dulzura Survey Parcels

FIGURE 3

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Dulzura Survey Parcels on Aerial Photograph

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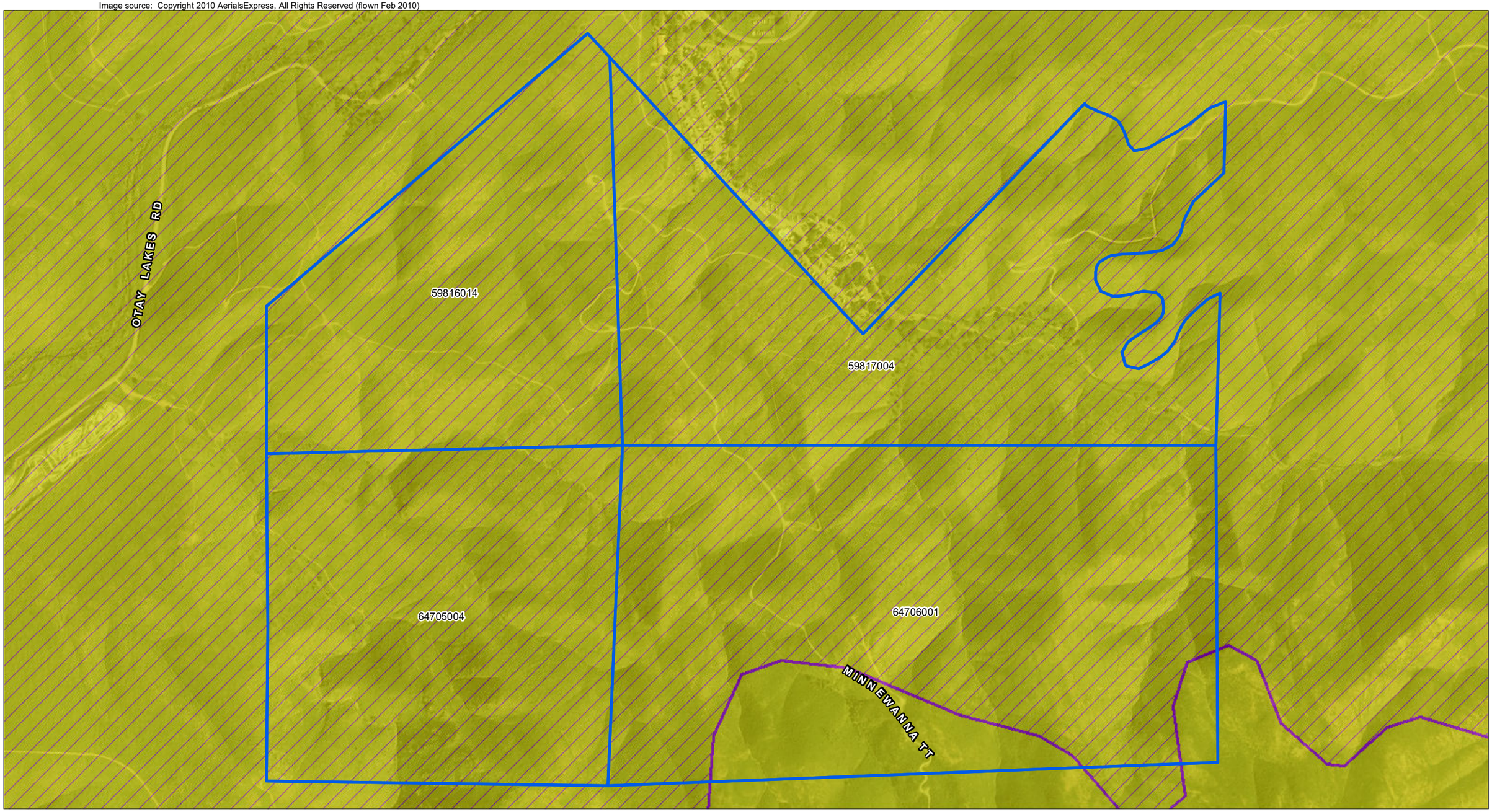

Dulzura Survey Parcels

Fire Burn History by Year

Otay/Mine Fire 2003

Harris Fire 2007

FIGURE 4

Dulzura Survey Parcels Fire History

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Vascular Plants, Bryophytes, and Lichens List (State of California 2011a) and *Special Animals List* (State of California 2011b), and the City of Chula Vista Subarea Plan Covered Species (City of Chula Vista 2003)

Rare Plants of San Diego County, *A Flora of San Diego County*, the Jepson Online Interchange, and *The Jepson Manual: Higher Plants of California* were reviewed for historical presence and species descriptions of plants that may occur within the San Ysidro Mountains (Reiser 2001; Beauchamp 1986; University of California 2011; Hickman 1993). Scientific articles such as Elvin's description of Jennifer's monardella (*Monardella stoneana*) (Elvin 2003), the IUCN Species Survival Commission's discussion of Thorne's hairstreak in *Conservation Biology of Lycinidae (Butterflies)* (IUCN 1993), and grey literature such as *A Summary of Affected Flora and Fauna in the San Diego County Fires of 2003* (San Diego County Biological Resource Researchers 2003) were reviewed to determine if suitable habitat was present for certain sensitive species.

3.2 Botanical Resources

RECON personnel conducted baseline surveys for botanical resources by mapping vegetation communities and compiling an inventory of the flora within the Dulzura parcels. Survey dates and personnel for the botanical resources baseline surveys are presented in Table 1. The results of these surveys are discussed separately in Section 4.0, Resources and Survey Results.

TABLE 1
DULZURA PARCELS BOTANICAL RESOURCES -SURVEY DATES AND PERSONNEL

Survey Date	Task	Personnel Present
03/14/2011	Pre-Baseline Survey (Checked access at multiple locations)	Anna Bennett, Mark Dodero
04/21/2011	Vegetation mapping & floral inventory	Anna Bennett, Mark Dodero
04/22/2011	Vegetation mapping & floral inventory	Anna Bennett, Mark Dodero, JR Sundberg
04/26/2011	Vegetation mapping & floral inventory	Megan Lahti, Gerry Scheid, JR Sundberg
05/12/2011	Vegetation mapping & floral inventory	JR Sundberg, Kayo Valenti
05/16/2011	Vegetation mapping & floral inventory	Megan Lahti, JR Sundberg
05/20/2011	Vegetation mapping & floral inventory	Megan Lahti, JR Sundberg
05/23/2011	Vegetation mapping & floral inventory	Gerry Scheid, JR Sundberg

3.2.1 Vegetation Communities

The main objective of the baseline vegetation community mapping was to identify vegetation communities suitable for sensitive plants and wildlife occurrences and to

guide future preserve management decisions. Communities were mapped on 1-inch-equals-200-feet aerial photographs flown in February 2010. County of San Diego Department of Land Use vegetation communities mapped in August 2004 and November 2005 were used as a reference for the updated 2011 mapping. Meandering transects were walked by biologists through the range of habitats and other conditions present within the Dulzura parcels.

Vegetation communities and land cover types were typically determined by the dominant plant species present and classified using the *Draft Vegetation Communities of San Diego County* (Oberbauer, et al. 2008) which is based on Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). A minimum of five percent cover of shrubs was used as the criterion for assigning a unit to a shrub community rather than herbaceous communities such as non-native grasslands. Criteria for these determinations are described in further detail in Section 4.1.3, Botanical Resources.

3.2.2 Plant Surveys

General plant surveys were conducted simultaneously with the surveys described in Section 3.2.1 Vegetation Communities, to identify plant species present within the vegetation communities surveyed. All plant species apparent at the time of the surveys were recorded. Floral nomenclature for species follows that which is specified in the Jepson Online Interchange (University of California 2011). Species that could not be readily identified in the field were collected and identified using a taxonomic key. Although focused sensitive plant surveys were not conducted, sensitive plant species identified during the general plant surveys were mapped using a hand held Trimble® GPS unit, and the species lists were revised accordingly. Assessments of the sensitivity of plant species are based primarily on City of Chula Vista (2003), State of California (2011c), and CNPS (2011).

Assessments for the potential occurrence of sensitive plant species are based upon species occurrence records from the CNDDB within a two-mile radius of the Dulzura parcels (Figure 5). Likelihood for reoccurrence within the Dulzura parcels was evaluated based on habitat requirements, range, the timing constraints of the surveys, and visibility potential.

3.3 Wildlife

RECON personnel conducted baseline wildlife surveys to (1) identify species assemblages associated with various post-burn vegetation communities, and (2) identify any indicator species that may correspond with particular floristic and/or structural habitat characteristics. Survey dates and personnel for the baseline surveys are

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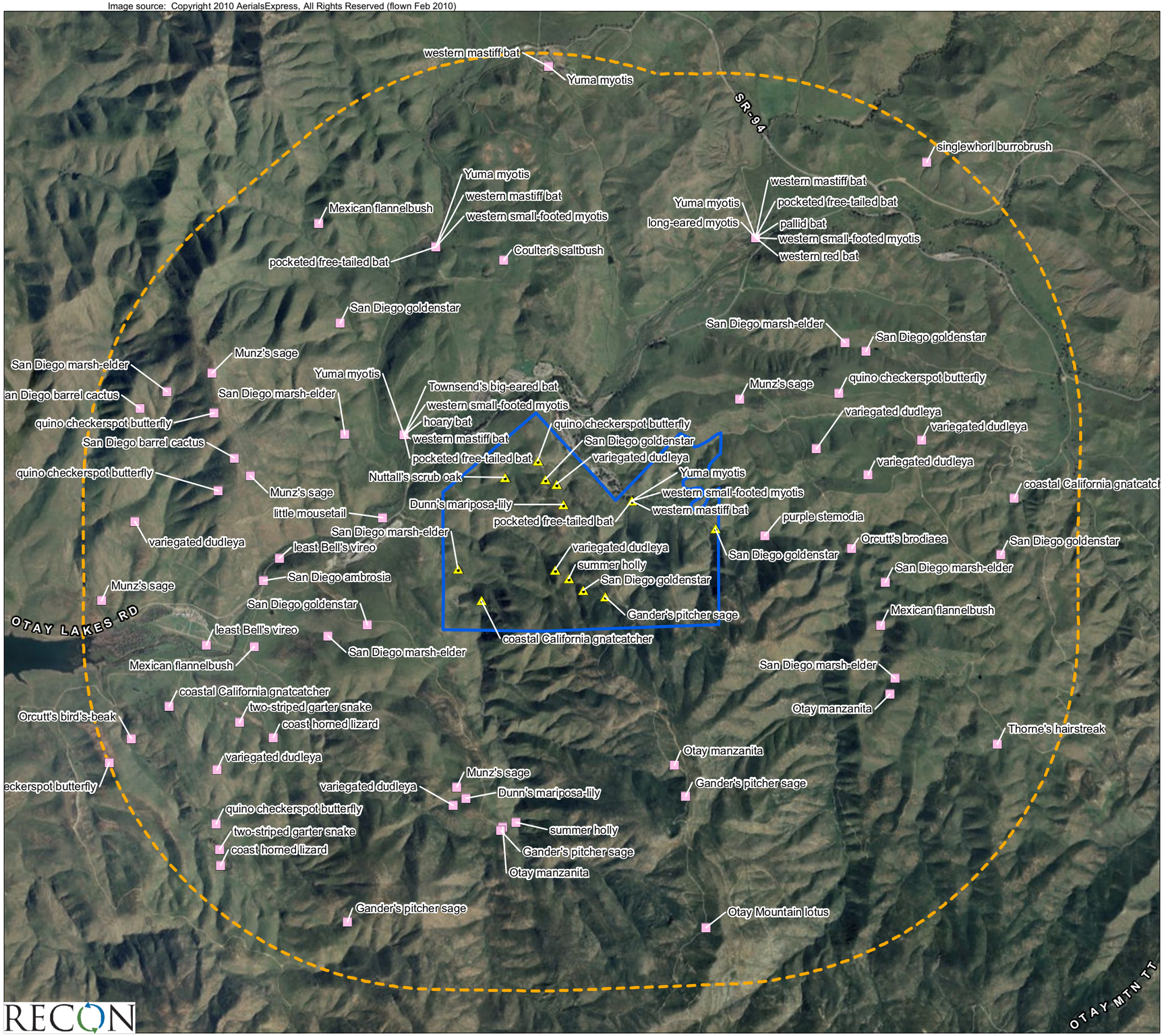

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Dulzura Survey Parcels

2 Mile Buffer

CNDDB Observations

Species Previously Observed in Dulzura Parcels

Species Previously Observed Within 2 Miles of Dulzura Parcels

0 Feet 3,000

FIGURE 5

California Natural Diversity Database Species

TABLE 2
DULZURA PARCELS BASELINE WILDLIFE-SURVEY DATES AND PERSONNEL

Date	Observers	Specific Areas	Field Hours	Total Hours	Weather
04/06/2011	John Lovio	NE SE sec. 34, T17S, R1E And E ½ NW sec. 2, T18S, R1E (focal counts)	0800-1330	9.0	60-68ºF 70-100% heavy cloud cover to 50% thin cloud cover Winds 0 to gusty, 10-20 mph
04/07/2011	John Lovio	SW ½ of NW ¼ and S ½ of SE sec. 35, T17S, R1E	0715-1215	7.5	54-64ºF Variable, overcast 70-100% Winds 0 to gusty, 5-10 mph
04/11/2011	Erin McKinney, Beth Proscal	-	0745-0145	6	50-78ºF Cloud cover 35 to 85% Winds gusty, 0 to 7 mph
04/12/2011	John Lovio	SE SE sec. 34, T17S, R1E And NE NE sec. 3 & SW NW sec. 2, T18S, R1E	0800-1430	8.5	51-70ºF Clear Wind 3 to 10 mph
04/20/2011	John Lovio	SE sec. 34, T17S, R1E	0745-1045	5.25	58-67ºF 70% cloud cover Winds 1-5 mph
05/04/2011	Megan Lahti, John Lovio	-	0630-1245	6.25	43-87ºF Clear Winds 0 to gusty, 5-10 mph
06/09/2011	John Lovio	-	0515-1515	10	56-70ºF Heavy overcast with light mist, up to 30% cloud cover Winds 0 to 10 mph
07/20/2011	Anna Bennett, Mark Dodero	-	-	-	-
07/25/2011	Anna Bennett, Mark Dodero	-	-	-	-

presented in Table 2. The results of these surveys are discussed separately in Section 4.0, Resources and Survey Results.

3.3.1 General Wildlife Surveys

The baseline wildlife surveys of the Dulzura parcels were conducted on the basis of defined focal survey areas and were related to specific sets of habitat conditions present at the time the baseline surveys were conducted. Irregular transects were designed to represent the range of habitats and other conditions (e.g., hydrology, topography) within each focal area. An effort was made to sample each habitat type within a focal area in approximate proportion to its occurrence. Survey effort was allocated among a range of weather conditions conducive to activity by the various target taxa (e.g., cool mornings for birds, warm weather for reptiles and butterflies). Routes were mapped on 1-inch-equals-800-feet aerial photographs flown in February 2010 to allow scaling of quantitative data, since route lengths and configurations were not uniform.

An effort was made to conduct repeat visits to certain focal areas so as to document the levels of consistency or seasonal change in wildlife assemblage composition. Repeat visits to focal areas did not repeat the previous survey routes exactly, but often overlapped significantly. The robustness of the above sampling method was examined by comparing the degree of similarity of species composition and counts among transects within and among focal areas with similar combinations of habitat features.

All wildlife species apparent at the time of the surveys were recorded for each subunit. Individuals of the following taxa were surveyed during inventories: butterflies, amphibians, reptiles, birds, and mammals. All animal species were observed visually or detected from calls, tracks, scat, or nests. Because surveys were performed during the day, nocturnal animals were identified only by sign. Bird species and often other species were annotated as to habitat association. Any sensitive wildlife species identified during the general wildlife surveys were also recorded, and the species lists revised accordingly.

Assessments for the potential occurrence of sensitive wildlife species are based upon species occurrence records from the CNDDB within a two-mile radius of the Dulzura parcels. Likelihood for reoccurrence within the Dulzura parcels was evaluated based on habitat requirements, range, and the timing constraints of the surveys.

Zoological nomenclature for invertebrates is in accordance with Mattoni (1990) and Opler, et al. (1999); for amphibians and reptiles, Crother (2001, 2008) and Crother et al. (2003); for birds with the American Ornithologists' Union Checklist (1998) and Unitt (1984, 2004); and for mammals, Baker et al. (2003) and Hall (1981). Assessments of the sensitivity of species and habitats are based primarily on State of California (2011b, 2011d), City of Chula Vista (2003), and Oberbauer et al. (2008).

3.4 Wildlife Movement

Wildlife movement was incidentally observed during baseline wildlife surveys. Constraints to wildlife movement are discussed below.

3.5 Drainages

Major drainages and channels are defined here as either natural or artificial channels that provide a course for the flow of water, whether that flow is continuous or intermittent. These drainages occur in the canyon bottoms and are often associated with riparian vegetation. Drainages were determined using USGS 7.5 minute topographic maps and performing a visual inspection in the field.

3.6 Dumping, Trespassing, and Vagrant Encampments

Dumping, trespassing, and vagrant encampments were incidentally observed and recorded during baseline surveys.

4.0 Resources and Survey Results

4.1 Site Description

4.1.1 Topography

The Dulzura parcels occur in the San Ysidro Mountains, which are a part of the Peninsular Ranges. The topography consists of gently sloping to steep slopes. Elevation ranges from 640 feet on the northern edge to 1,720 feet on the southern edge of the Dulzura parcels. The Dulzura parcels contain two canyons: Cedar Canyon and Little Cedar Canyon. Little Cedar Canyon intersects the southwestern corner and Cedar Canyon intersects the northeastern corner of the Dulzura parcels (Google 2011). The topography of the Dulzura parcels is shown in Figure 6.

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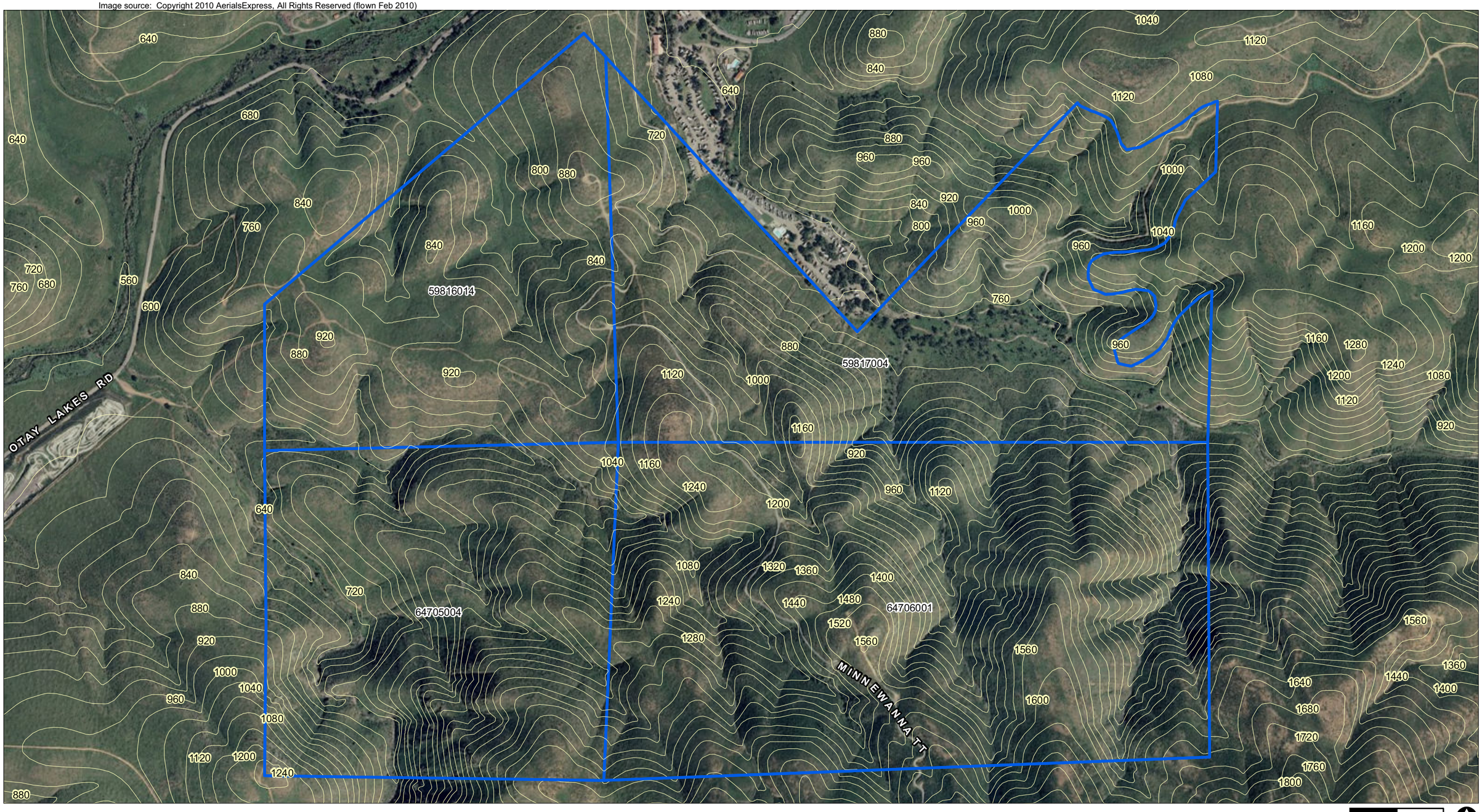

Dulzura Survey Parcels

20 ft Countour Intervals

FIGURE 6

Dulzura Survey Parcels Topography

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4.1.2 Soils

Five soil series occur in the Dulzura parcels: Anderson very gravelly sandy loam, Friant rocky fine sandy loam, Olivenhain cobbly loam, San Miguel-Exchequer rocky silt loam, and Visalia gravelly sandy loam (Figure 7). The acreages of these soil series are listed in Table 3.

TABLE 3
ACREAGES OF SOIL SERIES FOUND IN THE DULZURA PARCELS

Soil Series	Acreage
Anderson very gravelly sandy loam, 9 to 45% slopes	4 acres
Friant rocky fine sandy loam, 30 to 70% slopes	272 acres
Olivenhain cobbly loam, 30 to 50% slopes	<1 acre
San Miguel-Exchequer rocky silt loams, 9 to 70% slopes	495 acres
Visalia gravelly sandy loam, 5 to 9% slopes	30 acres

- The Anderson series consists of very gravelly sandy loams underlain by very gravelly coarse sandy loam. This soil occurs on colluvial slopes at elevations between 680 to 720 feet. Colluvial slopes occur when rock and soil material is deposited at the base of hillsides or mountains through gravity.

- The Friant series consists of shallow and very shallow, well-drained fine sandy loams underlain by hard metasedimentary rock. This soil occurs on mountainous uplands at elevations between 640 to 1,240 feet. Rock outcrop covers 2 to 10 percent of the surface.

- The Olivenhain series consists of moderately deep to deep cobbly loams with very cobbly clay subsoil. This soil occurs at elevations around 1,030 feet.

- The San Miguel-Exchequer series consists of shallow to moderately deep silt loams with clay subsoil. This soil occurs on mountainous uplands at elevations between 640 to 1,720 feet. Rock outcrop covers 10 percent of the surface.

- The Visalia series consists of very deep sandy loams underlain by loam and sandy loam. This soil occurs at elevations between 680 to 800 feet (USDA, et al. 1973).

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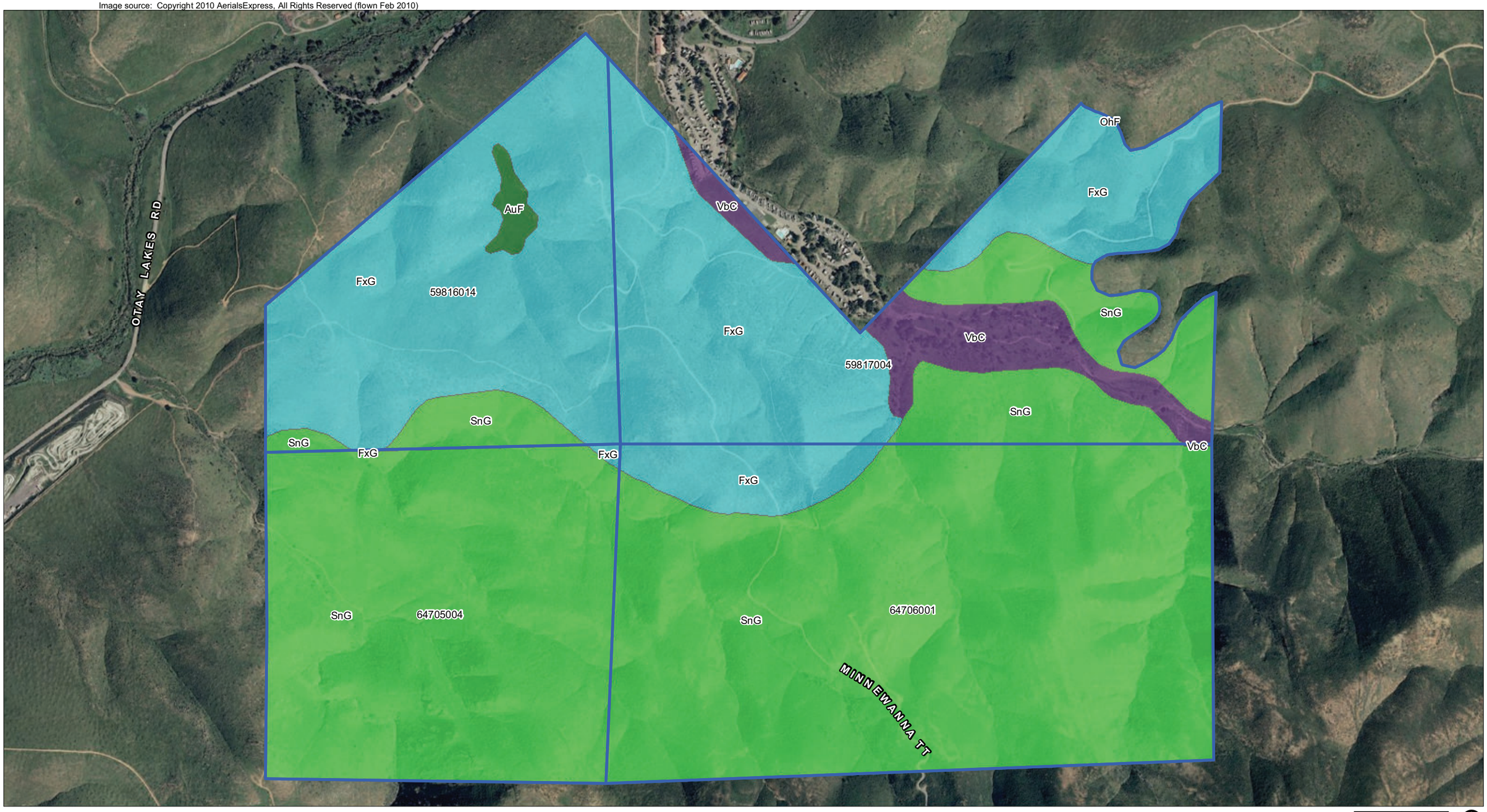

Dulzura Survey Parcels

Soil Classification

- AuF - Anderson very gravelly sandy loam, 9 to 45 percent slopes
- FxG - Friant rocky fine sandy loam, 30 to 70 percent slopes
- OhF - Olivenhain cobbly loam, 30 to 50 percent slopes
- SnG - San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes
- VbC - Visalia gravelly sandy loam, 5 to 9 percent slopes

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FIGURE 7

Dulzura Survey Parcels Soils

4.1.3 Botanical Resources

4.1.3.1 Plant Species

Attachment 1 provides a complete list of all plant species observed in the Dulzura parcels. A total of 221 plant species were observed in the Dulzura parcels. Of these species, 180 species are native and 41 species are non-native. Twenty of the native species are considered sensitive. The vegetation communities these plant species occur in are discussed below.

4.1.3.2 Vegetation Communities

There are 11 vegetation communities and land cover types present in the Dulzura parcels: Diegan coastal sage scrub, southern mixed chaparral, chamise chaparral, coastal sage-chaparral transition, southern interior cypress forest, non-native grassland, valley needlegrass grassland, urban/developed, open coast live oak woodland, freshwater seep, and southern riparian scrub. The acreages of these vegetation communities within the Dulzura parcels and their respective tiers under the MSCP are shown in Table 4. Vegetation communities mapped on-site are shown on Figure 8. The following text provides an explanation of the tier classification under the MSCP and general descriptions of the vegetation communities based on the *Draft Vegetation Communities of San Diego County* (Oberbauer 2008). More detailed description specific to the Dulzura parcels follow the general descriptions.

A description of each community is provided below with the Vegetation Community code from Oberbauer 2008 in parentheses.

TABLE 4
VEGETATION TYPES WITH ACREAGES AND PERCENT OF TOTAL COVER

Vegetation Types	Acres	Percent	Tier
Diegan Coastal Sage Scrub	440	55%	II
Southern Mixed Chaparral	251	31%	III
Southern Interior Cypress Forest	31	4%	I
Open Coast Live Oak Woodland	23	3%	I
Mafic Southern Mixed Chaparral	19	2%	III
Chamise Chaparral	15	2%	III
Coastal Sage-Chaparral Transition	10	1%	II
Southern Riparian Scrub	5	1%	NA
Non-Native Grassland	4	<1%	III
Valley Needlegrass Grassland	2	<1%	I
Urban/Developed	1	<1%	IV
Freshwater Seep	<1	<1%	NA

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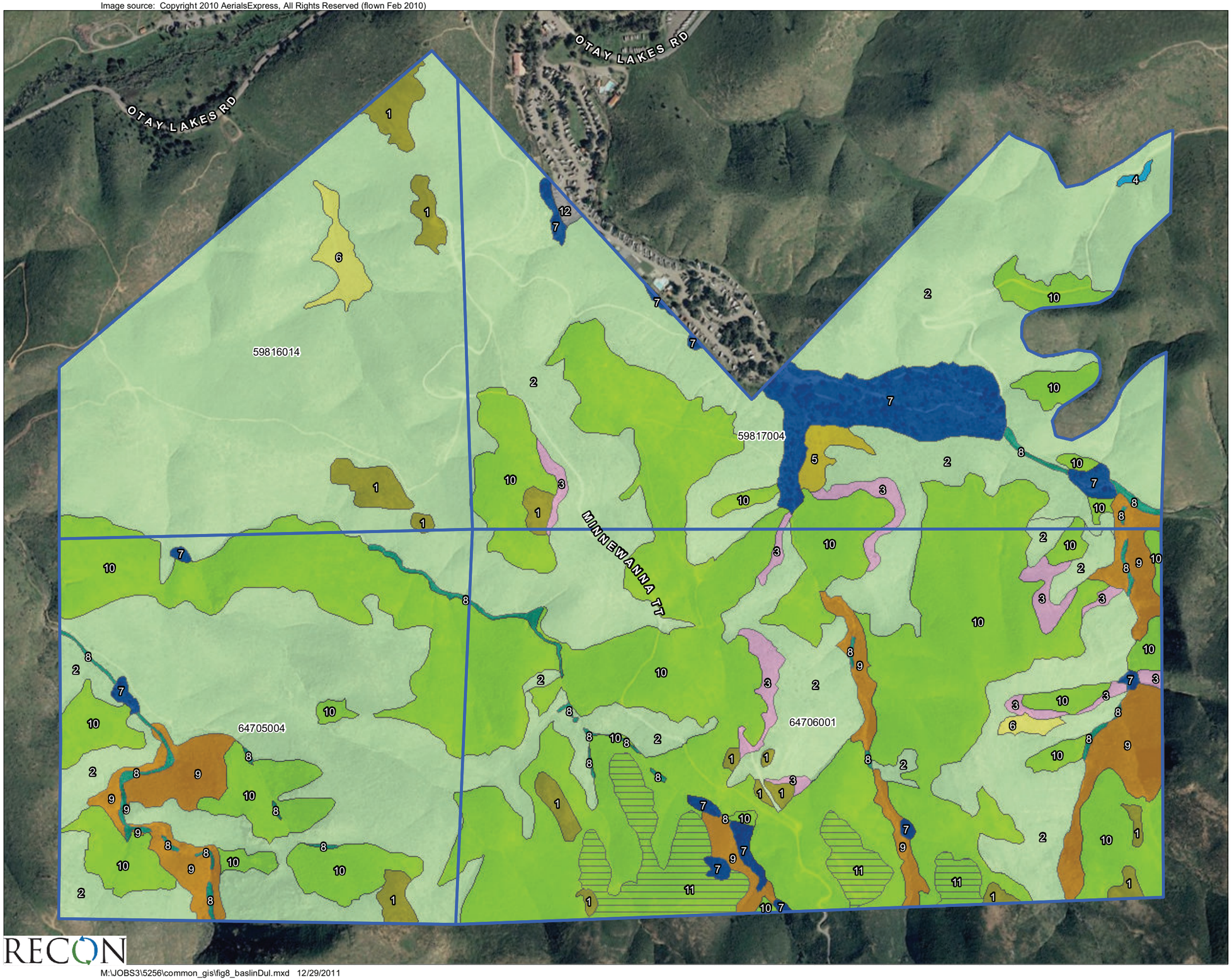

- Dulzura Survey Parcels

Vegetation Classification

- 1 - Chamise Chaparral
- 2 - Diegan Coastal Sage Scrub
- 3 - Coastal Sage-Chaparral Transition
- 4 - Freshwater Seep
- 5 - Valley Needlegrass Grassland
- 6 - Non-Native Grassland
- 7 - Open Coast Live Oak Woodland
- 8 - Southern Riparian Scrub
- 9 - Southern Interior Cypress Forest
- 10 - Southern Mixed Chaparral
- 11 - Mafic Southern Mixed Chaparral
- 12 - Urban/Developed

0 Feet 700

FIGURE 8
Dulzura Survey Parcels
Vegetation Communities
and Land Cover

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a. Diegan Coastal Sage Scrub (Oberbauer 32500)

Diegan coastal sage scrub is considered Tier II (uncommon upland) by the City of Chula Vista's MSCP (City of Chula Vista 2003). Diegan coastal sage scrub is the southern form of coastal sage scrub and is composed of low-growing, aromatic, drought-deciduous, soft-woody shrubs. Diegan coastal sage scrub is found in coastal areas from Los Angeles County south into Baja California. The community is typically found on sites that have low moisture availability, with steep, xeric slopes or clay rich soils that are slow to release stored water. These sites often include drier south- and west-facing slopes and occasionally north-facing slopes, where the community can act as a successional phase in chaparral development. The plant community is typically dominated by facultatively drought deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and white sage (*Salvia apiana*) (Oberbauer 2008). These species tend to be dominant, with San Diego County viguiera (*Bahiopsis lacinata*), golden-yarrow (*Eriophyllum confertiflorum*), and deerweed (*Acmispon glaber*) often present.

The Diegan coastal sage scrub at the Dulzura parcels is typically dominated by California sagebrush, California buckwheat, and deerweed (Photograph 1); however, there is a high degree of variability within Diegan coastal sage scrub on the Dulzura parcels. Some areas, particularly in the eastern part, are dominated by San Diego County viguiera with California sagebrush as a sub-dominant (Photograph 2). Other variants were dominated by golden-yarrow and deerweed with scattered laurel sumac. White sage and laurel sumac are common components of the Diegan coastal sage scrub at the Dulzura parcels, but are never dominant species.

Understory species present in this community include purple owl's clover (*Castilleja exerta*), ashy spike-moss (*Selaginella cinerascens*), blue dicks (*Dichelostemma capitatum*), wild-celery (*Apiastrum angustifolium*), rattlesnake weed (*Daucus pusillus*), blue-eyed grass (*Sisyrinchium bellum*), small flower soap plant (*Chlorogalum parviflorum*), chaparral morning-glory (*Calystegia macrostegia*), and common goldenstar (*Bloomeria crocea*). Non-native annual grasses are present in nearly all of the Diegan coastal sage scrub stands. These species include slender wild oat (*Avena barbata*), purple falsebrome (*Brachypodium distachyon*), rattail fescue (*Vulpia myuros*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and red brome (*Bromus madritensis* ssp. *rubens*).

Diegan coastal sage scrub occurs on approximately 440 acres, comprising 55 percent of the total acreage of the Dulzura parcels.

PHOTOGRAPH 1
California Sagebrush (*Artemisia californica*) Dominates CSS at Dulzura

PHOTOGRAPH 2
San Diego County Viguiera (*Bahiopsis laciniata*)
Dominates Many Stands of CSS

b. Southern Mixed Chaparral (Oberbauer 37120)

Southern mixed chaparral is considered Tier III (common upland) by the MSCP (City of Chula Vista 2003). Southern mixed chaparral is a plant community typically dominated by broad-leaved sclerophyllous shrubs or small trees. Southern mixed chaparral typically is found in coastal foothills of San Diego County at elevations below 3,000 feet. It usually occupies canyon slopes or ravines where mesic conditions are present. The vegetation is usually dense, with little or no understory cover, but may include patches of bare soil. Many species in this community are adapted to repeated fires by their ability to stump sprout. Dominant shrubs in this community range 4 to 10 feet tall and may include manzanita (*Arctostaphylos* sp.), toyon (*Heteromeles arbutifolia*), sugar bush (*Rhus ovata*), ceanothus (*Ceanothus* sp.), and mission manzanita (*Xylococcus bicolor*) (Oberbauer 2008).

The southern mixed chaparral at the Dulzura parcels is typically dominated by hairy ceanothus (*Ceanothus oliganthus*), Eastwood's manzanita (*Arctostaphylos glandulosa* ssp. *glandulosa*), and mission manzanita. Laurel sumac, mountain-mahogany (*Cercocarpus minutiflorus*), spiny redberry (*Rhamnus crocea*), chamise (*Adenostoma fasciculatum*), sugar bush, toyon, and scrub oak (*Quercus berberidifolia*) were often present in the southern mixed chaparral stands (Photograph 3). Additional native shrub species that are less prevalent include chaparral currant (*Ribes malvaceum* var. *viridifolium*) and chaparral mallow (*Malacothamnus fasciculatus*). Non-native grass species such as slender wild oat are present, but are not as prevalent as within the Diegan coastal sage scrub.

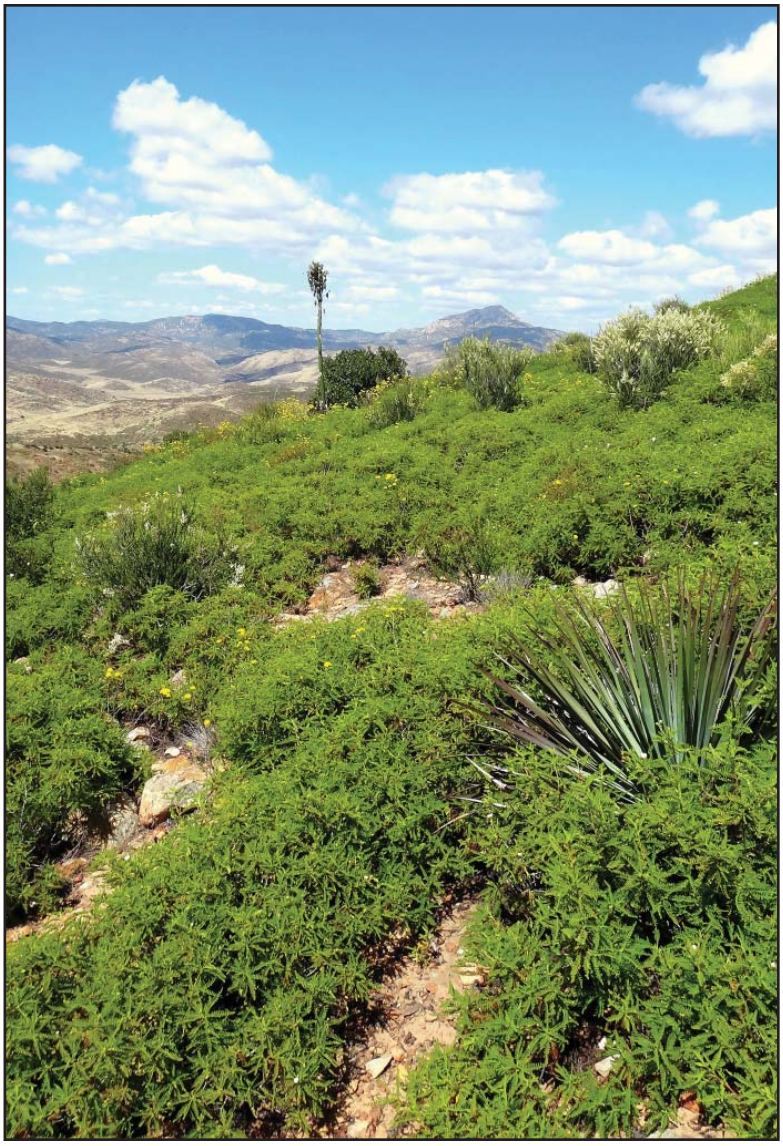
Southern mixed chaparral is present on 251 acres, comprising 31 percent of the Dulzura parcels total.

c. Mafic Southern Mixed Chaparral (Oberbauer 37122)

Mafic southern mixed chaparral is considered Tier III (common upland) by the MSCP (City of Chula Vista 2003). Mafic southern mixed chaparral occurs on mafic, metavolcanic, or metasedimentary derived soils and is typically dominated by chamise and Cleveland sage (*Salvia clevelandii*) (Oberbauer 2008).

In the southern part of the parcels at higher elevations, mafic southern mixed chaparral occurs as a variant form of southern mixed chaparral dominated by chamise and southern mountain-misery (*Chamaebatia australis*) with lesser amounts of hairy ceanothus (Photograph 4). This variant tends to be shorter (one to two meters) than southern mixed chaparral and occurs on mafic soils such as San Miguel-Exchequer rocky silt loam. Additional species present within the mafic southern mixed chaparral include our Lord's candle (*Yucca whipplei*), sugar bush, and golden-yarrow. Non-native grasses and other non-native herbaceous species are not common in the mafic southern

PHOTOGRAPH 3
Southern Mixed Chaparral at Dulzura with Ramona-lilac (*Ceanothus tomentosus*) and Chamise (*Adenostoma fasciculatum*)



PHOTOGRAPH 4
Mafic Southern Mixed Chaparral Often Dominated by Southern Mountain-misery (*Chamaebatia australis*)

mixed chaparral understory. Cleveland sage was not observed within the mafic southern mixed chaparral.

Mafic southern mixed chaparral occurs on 19 acres, comprising 2 percent of the Dulzura parcels total.

d. Chamise Chaparral (Oberbauer 37200)

Chamise chaparral is considered Tier III (common upland) by the MSCP (City of Chula Vista 2003). Chamise chaparral is the most common type of chaparral community in southern California. This plant community is dominated by chamise, a shrub that is 3 to 10 feet in height. Associated species contribute little to cover, and mature stands are densely interwoven with very little herbaceous understory or litter. Chamise chaparral is often found on xeric slopes and ridges at low elevations. Granitic chamise chaparral is found in areas where the soil has a granitic base. Chamise chaparral is adapted to repeated fires by its ability to stump sprout (Oberbauer 2008). Though chamise is the dominant plant in this community, peak rush-rose (*Helianthemum scoparium*), mission manzanita, and our Lord's candle can occur (Photograph 5). The chamise chaparral understory consists of native flowers such as purple owl's clover, weed mariposa lily (*Calochortus weedii* var. *weedii*), little-jim sanicle (*Sanicula arguta*), and blue dicks, which occur within the interspaces between shrubs. Non-native grasses and forbs are not common in the chamise chaparral understory. Additional native shrub species that are less prevalent include Nuttall's scrub oak (*Quercus dumosa*).

Chamise chaparral is present on 15 acres, comprising 2 percent of the Dulzura parcels total.

e. Coastal Sage-Chaparral Transition (Oberbauer 37G00)

Coastal sage–chaparral transition is considered Tier II (uncommon upland) by the MSCP (City of Chula Vista 2003). Coastal sage–chaparral transition contains a mix of woody chaparral species and drought-deciduous sage scrub species. This vegetation type is found from the outer Coast Ranges and Peninsular Range from Big Sur south to Baja California. The association is an intermediate between coastal scrub and chaparral associations and tends to be a post-fire successional community (Oberbauer 2008).

At the Dulzura parcels, areas with typical Diegan coastal sage scrub species, such as California sagebrush and California buckwheat, and significant quantities of chamise, Eastwood's manzanita, hairy ceanothus, scrub oak, or mission manzanita were considered coastal sage-chaparral transition (Photograph 6). The areas more similar to southern mixed chaparral are dominated by toyon, mission manzanita, scrub oak, hairy ceanothus, and laurel sumac. The areas more similar to coastal sage scrub are dominated by California sagebrush, California buckwheat, white sage, deerweed, and golden-yarrow.

PHOTOGRAPH 5
Chamise Chaparral Recovering After the Harris Fire

PHOTOGRAPH 6
Coastal Sage-Chaparral Transition Habitat Consists of a Mixture of California Sagebrush and Chamise

Coastal sage-chaparral transition is present on 10 acres, comprising 1 percent of the Dulzura parcels total.

f. Southern Interior Cypress Forest (Oberbauer 83230)

Southern interior cypress forest is a fire-maintained, low forest dominated by Tecate cypress (*Hesperocyparis forbesii*). Many stands are even-aged to the influence of fire. Southern interior cypress forest often occurs as isolated groves within chaparral associations (Oberbauer 2008).

Typical species within the southern interior cypress forest at the Dulzura parcels include Tecate cypress, chamise, and golden-yarrow. Within the Dulzura parcels, this association was mapped when living Tecate cypress was present (Photograph 7). Tecate cypress saplings were often found by dead trunks remaining from the fires in 2003 and 2007. The area surrounding the dead trunks were carefully inspected for new recruits. If there were no living recruits found, the association was mapped as the dominant vegetation (usually southern mixed chaparral or coastal sage-chaparral transition). These associations could be examples of type conversion.

Southern interior cypress forest is present on 31 acres, comprising 4 percent of the Dulzura parcels total.

g. Non-native Grassland (Oberbauer 42200)

Non-native grassland is considered Tier III (common upland) by the City of Chula Vista's MSCP (City of Chula Vista 2003). Non-native grassland is a vegetation community characterized by at least 50 percent cover of the entire herbaceous layer from annual non-native grass species, although other plant species (native and non-native) may be intermixed (City of San Diego 2000). This association may contain wild oat, bromes (*Bromus* spp.), ryegrass (*Lolium* spp.), and fescues (*Vulpia* spp.). These annuals germinate with the onset of the rainy season and set seeds in the late winter or spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. Typically, this plant community is found in valleys and foothills throughout most of California at elevations below 4,000 feet (Oberbauer 2008).

The non-native grassland at the Dulzura parcels is typically dominated by red brome or ripgut brome, with some slender wild oat intermixed. In more mesic areas, Italian ryegrass (*Lolium multiflorum*) and soft chess are dominant. Dense thatch created by dead annual non-native grasses from previous years restricts native plant germination and allows for non-native grasses to out-compete many of the surrounding native species.

Non-native grassland occurs on four acres, representing a negligible amount (less than 1 percent) of the Dulzura parcels total.

PHOTOGRAPH 7
Southern Interior Cypress Forest Characterized by
Seedling Tecate Cypress (*Hesperocyparis forbesii*)

PHOTOGRAPH 8
Valley Needlegrass Grassland at Dulzura with
Purple Needlegrass (*Nassella pulchra*)

h. Valley Needlegrass Grassland (Oberbauer 42110)

Valley needlegrass grassland is considered Tier I (rare upland) by the MSCP (City of Chula Vista 2003). Valley needlegrass grassland is a mid-height (up to two feet) native grassland dominated by purple needlegrass (*Nassella pulchra*) or foothill needlegrass (*Nassella lepida*). Valley needlegrass grassland often contains a high percentage of native and non-native annuals, but is considered native grassland if 20 percent aerial cover of native species is present. This association often occurs on fine-textured soils that are moist to waterlogged in winter and dry in the summer (Oberbauer 2008).

The valley needlegrass grassland at the Dulzura parcels is dominated by purple needlegrass (Photograph 8). Other species often present in high numbers are red brome, rattail fescue, blue-eyed-grass, and several species of perennial bulbs such as lilac mariposa lily (*Calochortus splendens*). Native wildflowers, including checker-bloom (*Sidalcea sparsiflora*), johnny-jump-up (*Viola pedunculata*), little-jim sanicle, and golden tarplant (*Deinandra fasciculata*), are interspersed between native bunch grasses and native shrubs such as California sagebrush, California buckwheat, and decumbent goldenbush (*Isocoma menziesii* var. *decumbens*).

Valley needlegrass grassland occurs on two acres, representing a negligible amount (less than 1 percent) of the Dulzura parcels total.

i. Urban/Developed (Oberbauer 12000)

Urban/developed land is an area where native vegetation is no longer supported due to development or other physical alteration. This may include landscaping with ornamental plants, hardscaping with pavement or other materials, and permanent or semi-permanent structures (Oberbauer 2008).

There is approximately one acre of urban/developed areas within the northeastern parcel of the Dulzura parcels, representing a negligible amount (less than 1 percent) of the Dulzura parcels total. The Thousand Trails Recreational Vehicle Park was mapped as urban/developed.

j. Open Coast Live Oak Woodland (Oberbauer 71161)

Coast live oak (*Quercus agrifolia*) woodland is considered Tier I (rare upland) by the MSCP (City of Chula Vista 2003). Open coast live oak woodland is a vegetation community defined as having one primary tree, coast live oak, as the dominant species of the community, with canopy cover less than 50 percent. Coast live oak woodlands are present throughout the foothill and mountain regions of San Diego County. They mostly occur in canyons with high perennial groundwater (Oberbauer 2008).

In the Dulzura parcels, small pockets occur in upper canyons along drainages (Photograph 9). Mature coast live oaks are dominant, with western poison oak (*Toxicodendron diversilobum*) and immature Engelmann oaks (*Quercus engelmannii*) occurring in the understory. Non-native grasses such as ripgut brome, red brome, and soft chess are common and constitute the majority of the herbaceous layer of the understory.

Open coast live oak woodland occurs on 23 acres, representing 3 percent of the Dulzura parcels total.

k. Freshwater Seep (Oberbauer 45400)

Freshwater seep is a sensitive wetland community. Freshwater seeps are associated with grasslands or meadow habitats with permanently moist soil. In San Diego County, they often occur as part of narrow drainages or springs. Perennial herbs usually form complete cover. Characteristic species include rushes (*Juncus* spp.), spike-rush (*Eleocharis* spp.), and deergrass (*Muhlenbergia rigens*) (Oberbauer 2008).

Freshwater seep is located in the northwestern corner of the Dulzura parcels (Photograph 10). The seep is approximately 0.35 acre and occurs in an area with little slope and a slight southwest aspect. The dominant rush species present is Baltic rush (*Juncus balticus*), with Parish's spike-rush (*Eleocharis parishii*) occurring in the dampest areas. Yerba mansa (*Anemopsis californica*) dominates the outer edges of the freshwater seep, with deergrass, saltgrass (*Distichilis spicata*), and mule fat also (*Baccharis salicifolia*) also present.

Freshwater seep occurs on less than one acre, representing a negligible amount (less than 1 percent) of the Dulzura parcels total.

l. Southern Riparian Scrub (Oberbauer 63300)

Southern riparian scrub is a riparian community dominated by small trees or shrubs. Taller riparian trees are not present. This community is mostly in major river systems where flood scour occurs and has expanded due to increased urban and agricultural runoff. Mule fat scrub and southern willow scrub are forms of the broader category of southern riparian scrub (Oberbauer, et al. 2008).

The southern riparian scrub at the Dulzura parcels is a depauperate riparian community dominated by a scattered mix of herbs and shrubs. Characteristic shrub species include mule fat, willows (*Salix* spp.), coyote bush (*Baccharis pilularis*), and western poison oak (Photograph 11). Herbs present include San Diego sedge (*Carex spissa*), California fuchsia (*Epilobium canum*), cattail (*Typha* sp.) and spike-rush. The southern riparian scrub at the Dulzura parcels is variable, with no species clearly dominating. On-site, this community is represented by noncontiguous narrow strips along the drainages at the

PHOTOGRAPH 9
Largest Stand of Open Coast Live Oak Woodland
Found East of Thousand Trails Campground

PHOTOGRAPH 10
Phase 1 Area Looking Downstream of Foussat Road Bridge

PHOTOGRAPH 11
Southern Riparian Scrub Recovering Postfire Dominated by Willows (*Salix* spp.) and Mulefat (*Baccharis salicifolia*)

bottom of canyons. In some cases this community is too small for mapping, and was included in the adjacent community, but effort was put into representing it as accurately as possible. Mule fat, coyote brush, arroyo willow (*Salix lasiolepis*), Goodding's black willow (*Salix gooddingii*), and narrow-leaf willow (*Salix exigua*) are present in most stands. Spike-rush is almost always present. Despite the presence of willow species, this vegetation community is not dense enough to qualify as southern willow scrub.

Southern riparian scrub occurs on five acres, representing 1 percent of the Dulzura parcels total.

4.1.4 Zoological Resources

Attachment 2 provides a complete list of all wildlife species observed in the Dulzura parcels. Wildlife observed includes 25 species of invertebrates, 2 species of amphibians, 7 species of reptiles, 71 species of birds, and 4 species of mammals.

4.1.4.1 Invertebrates

A total of 25 species of butterflies were observed. Twenty-four are not considered sensitive, and one species is considered sensitive (see Section 4.1.5.2, Sensitive Invertebrates).Some common butterfly species include pale swallowtail (*Papilio eurymedon*), Gabb's checkerspot (*Chlosyne gabbii*), common buckeye (*Junonia coenia*), and anise swallowtail (*Papilio zelicaon*). One sensitive invertebrate species was also observed, and is described in Section 4.1.5.2, Sensitive Invertebrates.

4.1.4.2 Amphibians

A total of two species of amphibians were observed: the Pacific treefrog (*Pseudacris regilla*) and California treefrog (*Pseudacris cadaverina*). Both species are not considered sensitive.

4.1.4.3 Reptiles

A total of seven species of reptiles were observed. Four are not considered sensitive and three are considered sensitive (see Section 4.1.5.3, Sensitive Reptiles). Four common reptile species were observed: San Diego gophersnake (*Pituphis catenifer annectens;* Photograph 12), coastal whiptail (*Aspidoscelis tigris stejnegeri*), western fence lizard (*Sceloporus occidentalis*), and common side-blotched lizard (*Uta stansburiana*).

PHOTOGRAPH 12
San Diego Gophersnake (*Pituophis catenifer annectens*) Observed at the Dulzura Parcels

4.1.4.4 Birds

Seventy-one bird species were observed in the Dulzura parcels. Sixty-seven species are not considered sensitive and four are considered sensitive (see Section 4.1.5.4, Sensitive Birds). One introduced species, European starling (*Sturnus vulgaris*), was observed.

Bird species commonly observed in the scrub and chaparral vegetation include western scrub-jay (*Aphelocoma californica*), lesser goldfinch (*Carduelis psaltria*), wrentit (*Chamaea fasciata henshawi*), California towhee (*Pipilo crissalis*), spotted towhee (*P. maculatus*), and Bewick's wren (*Thyromanes bewickii*).

Birds typically found in non-native grassland and disturbed environments include song sparrow (*Melospiza melodia*), grasshopper sparrow (*Ammodramus savannarum perpallidus*), American crow (*Corvus brachyrhynchos hesperis*), and western meadowlark (*Sturnella neglecta*).

Riparian vegetation communities provide habitat for many resident and migratory bird species. Migratory bird species commonly observed in riparian scrub include Pacific slope flycatcher (*Empidonax difficilis*) and ash-throated flycatcher (*Myiarchus cinerascens*). Resident bird species observed in riparian scrub include American kestrel (*Falco sparverius*), song sparrow, and western bluebird (*Sialia mexicana occidentalis*).

4.1.4.5 Mammals

A total of four mammal species were observed. Three are not considered sensitive and one is considered sensitive (See Section 4.1.5.5, Sensitive Mammals).Three common mammal species were observed in the Dulzura parcels: kangaroo rat (*Dipodomys* sp.), California ground squirrel (*Spermophilus beecheyi*), and desert cottontail (*Sylvilagus audubonii*).

4.1.5 Sensitive Species

Sensitive species were observed incidentally during general plant and wildlife surveys. For the purposes of this report, a species is considered sensitive if it is: (1) listed by state or federal agencies as threatened or endangered or are candidates or proposed for such listing; (2) considered rare, endangered, or threatened by the State of California (State of California 2011b, 2011c, 2011d); (3) a narrow endemic or covered species in the MSCP (City of Chula Vista 2003); (4) considered by CNPS to have a California Rare Plant Rank of 1B or 2 (CNPS 2010); or (5) considered rare, sensitive, or noteworthy by local conservation organizations or specialists. Noteworthy plant species are considered to be those that are considered by CNPS to have a California Rare Plant rank of 3 or 4. Sensitive habitat types are those identified by the MSCP and Oberbauer, et al. 2008.

Assessments for the potential occurrence of sensitive or noteworthy species are based upon species occurrence records from the CNDDB, Consortium of California Herbaria, and a literature review.

Attachment 3 provides a complete list of all sensitive plant species observed in the Dulzura parcels. Sensitive plant species in the Dulzura parcels are shown on Figure 9. Attachment 4 provides a complete list of all sensitive wildlife species observed in the Dulzura parcels. Sensitive wildlife species in the Dulzura parcels are shown on Figure 10.

4.1.5.1 Sensitive Plant Species

Twenty sensitive plant species were identified in the Dulzura parcels. Ten other sensitive plant species have the potential to occur. Several sensitive plant species are historically known to occur in the vicinity of the site, but were not observed during surveys. Many of these species are considered to have low potential for occurrence because of habitat requirements lacking within the Dulzura parcels. In other cases, species that are perennial or annual herbs may not have been detected due to timing constraints and are considered to have high potential for occurrence. These species are discussed below.

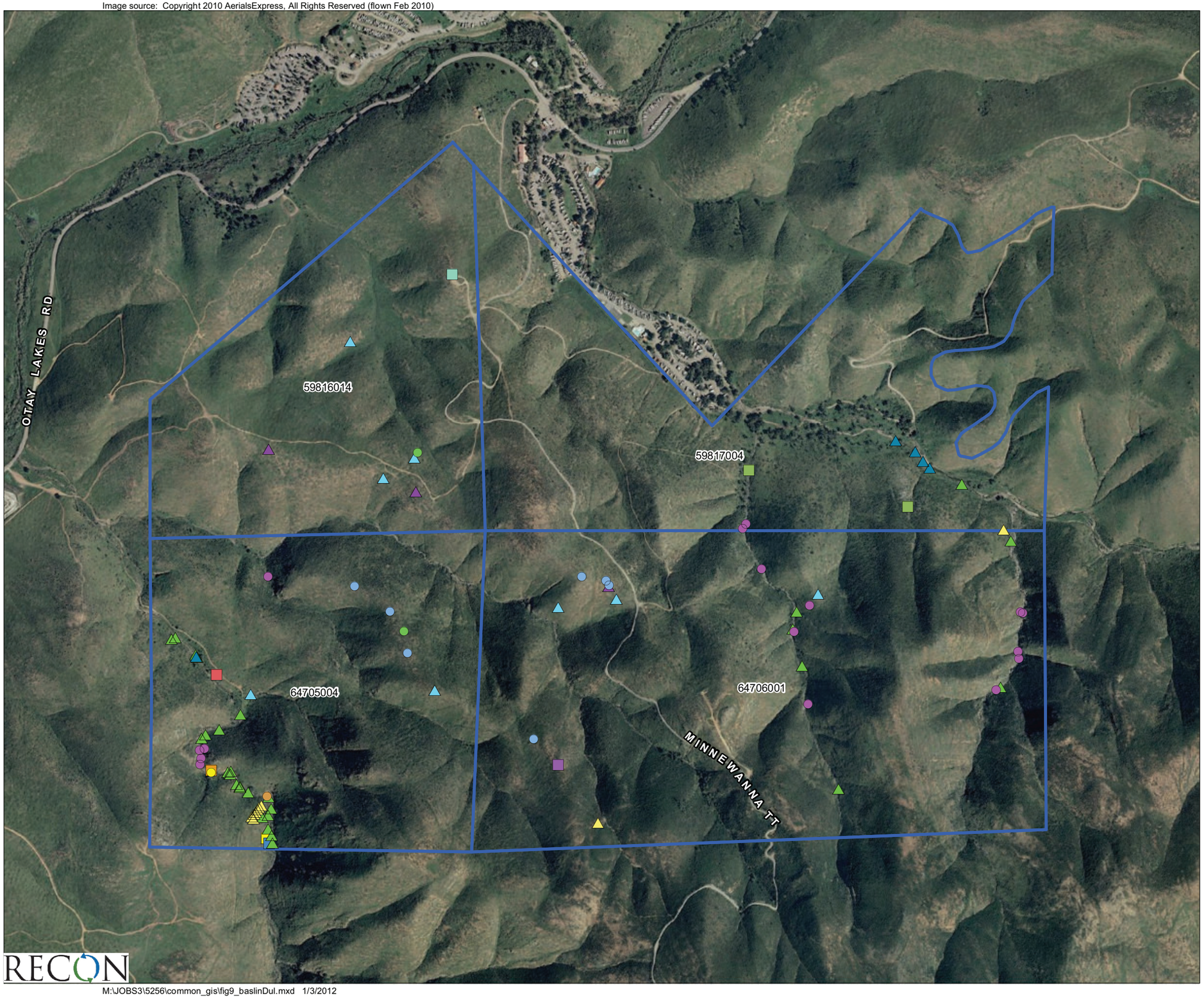
Many of these species are considered to have low potential for occurrence because of habitat requirements lacking within the Dulzura parcels. In other cases, species that are perennial or annual herbs may not have been detected due to timing constraints and are considered to have high potential for occurrence. These species are discussed below.

a. Observed

Dunn's mariposa lily (*Calochortus dunnii*) — a narrow endemic species covered under the MSCP. This perennial herb is state listed as rare, is a narrow endemic MSCP-covered species, and has a CNPS ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California). Dunn's mariposa lily was observed in Diegan coastal sage scrub and southern mixed chaparral associations.

Gander's pitcher sage (*Lepechinia ganderi*) — a narrow endemic species covered under the MSCP. This perennial shrub is a narrow endemic MSCP-covered species and has a CNPS ranking of 1B.3 (rare, threatened, or endangered in California and elsewhere; not very endangered in California). This species was observed on chamise chaparral, southern interior cypress forest, southern mixed chaparral, and mafic southern mixed chaparral (Photograph 13).

Image source: Copyright 2010 AerialsExpress, All Rights Reserved (flown Feb 2010)



Dulzura Survey Parcels

Sensitive Flora Observations

- Ashy Spike Moss
- Chaparral Rein-orchid
- Cleveland's Bush Monkeyflower
- Delicate Clarkia
- Dunn's Mariposa Lily
- Engelmann Oak
- Gander's Pitcher Sage
- Decumbent Goldenbush
- Mexican flannelbush
- Woolly Chaparral Pea
- Nuttall's Scrub Oak
- San Diego Barrel Cactus
- San Diego County Needle Grass
- San Diego Goldenstar
- San Diego Marsh-elder
- Tecate Cypress
- Western Dichondra

0 Feet 700

RECON

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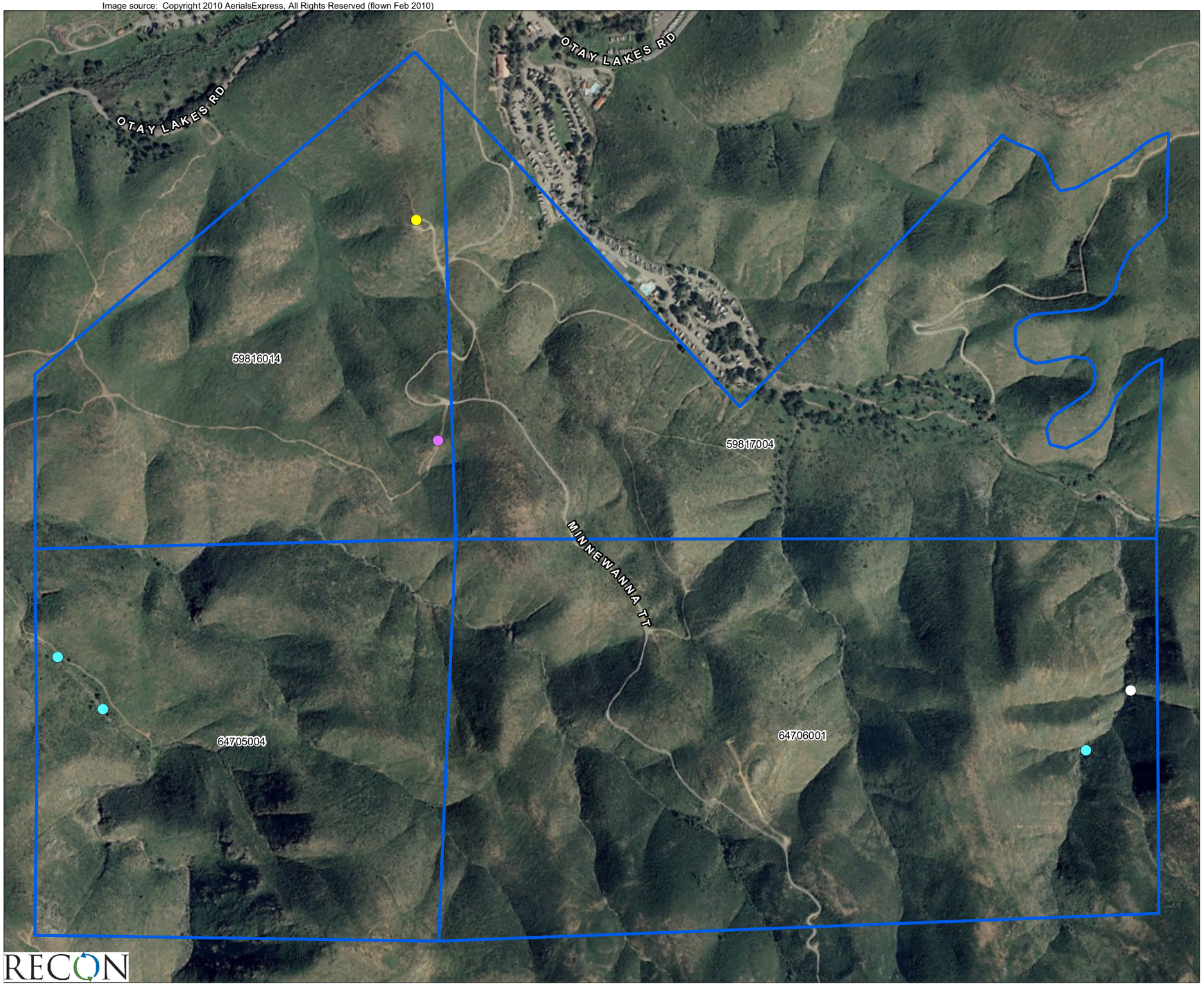
FIGURE 9

Dulzura Survey Parcels
Sensitive Plant Species

Image source: Copyright 2010 AerialsExpress, All Rights Reserved (flown Feb 2010)



Dulzura Survey Parcels

Sensitive Wildlife Observations

- Horned Lark
- Quino Checkerspot Butterfly
- Red Diamond Rattlesnake
- Two-striped Gartersnake

0 Feet 700

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FIGURE 10

Dulzura Survey Parcels
Sensitive Wildlife Species

PHOTOGRAPH 13
Ganders Pitcher Sage (*Lepechinia ganderi*) a MSCP
Narrow Endemic Found in Chaparral Communities at Dulzura

PHOTOGRAPH 14
San Diego Goldenstar (*Muilla clevelandii*)
Mapped at Three Locations at Dulzura

Tecate cypress (*Hesperocyparis forbesii*) — an MSCP-covered species. This perennial shrub is an MSCP-covered species and has a CNPS ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California). Tecate cypress was observed in Diegan coastal sage scrub, southern interior cypress forest, and the outer edges of southern riparian scrub associations.

San Diego goldenstar (*Muilla clevelandii*) — an MSCP-covered species. This perennial herb is an MSCP-covered species and has a CNPS ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California). San Diego goldenstar was observed in Diegan coastal sage scrub, mafic southern mixed chaparral, and southern interior cypress forest associations (Photograph 14). Within mafic southern mixed chaparral and southern interior cypress forest, San Diego goldenstar occurs in openings between shrubs. These areas were not large enough to map as valley needlegrass grassland or Diegan coastal sage scrub.

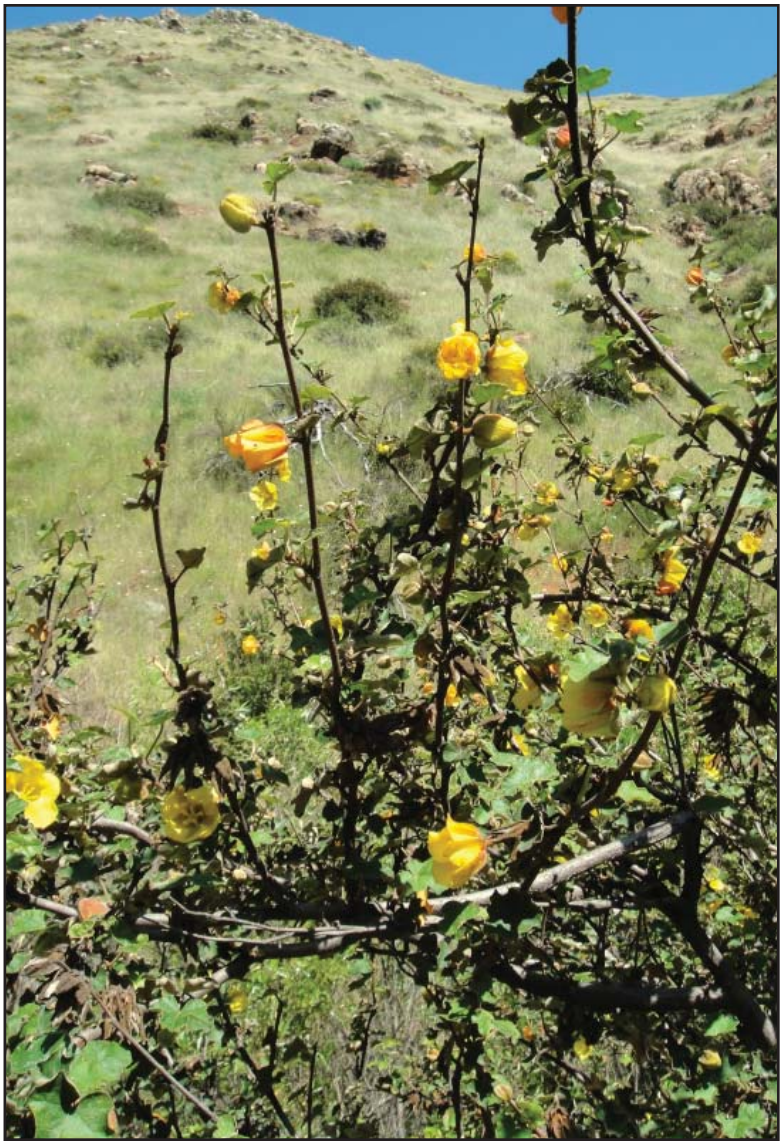
Otay manzanita (*Arctostaphylos otayensis*) — an MSCP-covered species. This perennial shrub is an MSCP-covered species and has a CNPS ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California). This species was observed in mafic southern mixed chaparral and southern interior cypress forest associations.

San Diego barrel cactus (*Ferocactus viridescens)* — an MSCP-covered species. This perennial cactus is an MSCP-covered species and has a CNPS ranking of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California). San Diego barrel cactus was observed in Diegan coastal sage scrub and between shrubs within openings of southern mixed chaparral associations.

Mexican flannelbush (*Fremontodendron mexicanum*). This perennial shrub is federally endangered, state listed as rare, and has a CNPS ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California). This species was observed at the transition between southern riparian scrub and southern interior cypress forest adjacent to the Little Cedar Canyon drainage (Photograph 15).

Delicate clarkia (*Clarkia delicata*). This annual herb has a CNPS ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California). Delicate clarkia was observed in Diegan coastal sage scrub, coastal sage-chaparral transition, southern mixed chaparral, and southern interior cypress forest associations (Photograph 16).

Nuttall's scrub oak (*Quercus dumosa*). This perennial shrub has a CNPS ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California). This species was observed in chamise chaparral.



PHOTOGRAPH 15
Mexican Flannelbush (*Fremontodenron mexicanum*) Occurs in Canyons in the Southwest Portion of the Dulzura Parcels

PHOTOGRAPH 16
Delicate Clarkia (*Clarkia delicata*) Found in CSS,
Mixed Chaparral, and Interior Cypress Forest

PHOTOGRAPH 17
Southern Mountain Misery (*Chamaebatia australis*) Often
Dominant in the Mafic Chaparral Vegetation Community

Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*). This perennial shrub has a CNPS ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California). Decumbent goldenbush was observed in Diegan coastal sage scrub associations.

Desert fragrance (*Ambrosia monogyra*). This perennial shrub has a CNPS ranking of 2.2 (rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California). This species was observed in southern riparian scrub located along the Cedar Canyon drainage.

San Diego marsh-elder (*Iva hayesiana*). This perennial herb has a CNPS ranking of 2.2 (rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California). San Diego marsh elder was observed in open coast live oak woodland and southern riparian scrub associations within Little Cedar Canyon and Cedar Canyon.

Ashy spike moss (*Selaginella cinerascens*). This perennial herb has a CNPS ranking of 4.1 (uncommon in California; endangered in California). This species was observed in southern mixed chaparral and Diegan coastal sage scrub.

San Diego County needlegrass (*Achnatherum diegoense*). This perennial grass has a CNPS ranking of 4.2 (uncommon in California; fairly endangered in California). San Diego County needle grass was observed in Diegan coastal sage scrub.

Southern mountain misery (*Chamaebatia australis*). This perennial shrub has a CNPS ranking of 4.2 (uncommon in California; fairly endangered in California). This species was observed within mafic southern mixed chaparral as a dominant or sub-dominant species (Photograph 18).

Western dichondra (*Dichondra occidentalis*). This perennial herb has a CNPS ranking of 4.2 (uncommon in California; fairly endangered in California). Western dichondra was observed in southern mixed chaparral and Diegan coastal sage scrub associations.

Cleveland's bush monkeyflower (*Mimulus clevelandii*). This perennial shrub has a CNPS ranking of 4.2 (uncommon in California; fairly endangered in California). Cleveland's bush monkeyflower was observed in southern interior cypress forest associations.

Chaparral rein-orchid (*Piperia cooperi*). This perennial herb has a CNPS ranking of 4.2 (uncommon in California; fairly endangered in California). Chaparral rein-orchid was observed in Diegan coastal sage scrub associations.

PHOTOGRAPH 18
Engelmann Oak (*Quercus engelmannii*) Found
in the Northeast Portion of the Dulzura Parcels

Engelmann oak (*Quercus engelmannii*). This tree has a CNPS ranking of 4.2 (uncommon in California; fairly endangered in California). Engelmann oak was observed in open coast live oak woodland.

San Diego County viguiera (*Bahiopsis* =[Viguiera] *laciniata*). This perennial shrub has a CNPS ranking of 4.2 (uncommon in California; fairly endangered in California; CNPS 2011). This species occurs in Diegan coastal sage scrub in the Dulzura parcels.

Woolly chaparral pea (*Pickeringia montana* var. *tomentosa*). This evergreen shrub has a CNPS ranking of 4.3 (uncommon in California; not very endangered in California). Woolly chaparral pea was observed in southern interior cypress forest within the Little Cedar Canyon drainage.

b. Not Observed

Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*) — a narrow endemic species covered under the MSCP. This perennial shrub is a narrow endemic MSCP-covered species and has a CNPS ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California). This species has a moderate potential to occur within the Dulzura parcels. Preferred habitat for this species is coastal scrub.

San Diego ambrosia (*Ambrosia pumila*) — a narrow endemic species covered under the MSCP. This perennial herb is federally endangered, a narrow endemic MSCP-covered species, and has a CNPS ranking of 1B.1 (rare, threatened, or endangered in California and elsewhere; seriously endangered in California). This species is known to occur within two miles of the Dulzura parcels (State of California 2011e). This species has a moderate potential to occur in the Dulzura parcels. Preferred habitat for this species is chaparral, coastal scrub, and valley and foothill grasslands with sandy loam or clay. Suitable sandy loam soils are present in drainages in the Dulzura parcels.

Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*) — a narrow endemic species covered under the MSCP. This perennial herb is a narrow endemic MSCP-covered species and has a CNPS ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California). This species has a moderate potential to occur within the Dulzura parcels. Preferred habitat is chaparral and rocky, granitic slopes or hilltops.

Variegated dudleya (*Dudleya variegata*) — a narrow endemic species covered under the MSCP. This succulent perennial is a narrow endemic MSCP-covered species and has a CNPS ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California). This species has a high potential to occur within the Dulzura parcels. This species is known to occur within two miles of the

Dulzura parcels along the western edge of Otay Mountain approximately five miles east southeast of Brown Field, approximately 1 mile south of Otay Lakes Road between Little Cedar Canyon and Cedar Canyon on the flanks of Otay Mountain, and on Otay Mountain approximately 1.5 miles east northeast of Buschalaugh Cove on Lower Otay Lake (State of California 2011e).

Orcutt's birdbeak (Dicranostegia =[*Cordylanthus*] *orcuttianus*) — an MSCP-covered species. This annual herb is an MSCP-covered species and has a CNPS ranking of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California). This species has a moderate potential to occur within the Dulzura parcels. This species is known to occur in a drainage within two miles of the Dulzura parcels (State of California 2011e). The preferred habitat is seasonally dry drainages and uplands adjacent to riparian habitats, both of which occur in the Dulzura parcels.

Coulter's saltbush (*Atriplex coulteri*). This perennial herb has a CNPS ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California). This species has a moderate potential to occur within the Dulzura parcels. This species is known to occur within two miles of the Dulzura parcels at the Rancho Jamul Ecological Reserve in similar habitat to that found in the Dulzura parcels (State of California 2011e).

Summer holly (*Comarostaphylis diversifolia*). This perennial shrub has a CNPS ranking of 1B.2 (rare, threatened, or endangered in California and elsewhere; fairly endangered in California). This species has a moderate potential to occur within the Dulzura parcels. Preferred habitat is chaparral.

Purple stemodia (*Stemodia durantifolia*). This perennial herb has a CNPS rating of 2.1 (rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California). This species has a moderate potential to occur within the Dulzura parcels. This species is known to occur within two miles of the Dulzura parcels (State of California 2011e). The preferred habitat is riparian habitats, wet sand or rocks, and drying streambeds. Therefore, this species has potential to occur within drainages at the Dulzura parcels.

Munz sage (*Salvia munzii*). This perennial shrub has a CNPS ranking of 2.2 (rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California). This species has a moderate potential to occur within the Dulzura parcels. This species is known to occur within two miles of the Dulzura parcels (State of California 2011e). The preferred habitat is chaparral and coastal scrub communities, both of which occur in the Dulzura parcels.

Ocellated Humboldt lily (*Lilium humboldtii* spp. *ocellatum*). This perennial herb has a CNPS ranking of 4.2 (uncommon in California; fairly endangered in California). This

species has moderate potential to occur within the Dulzura parcels. Preferred habitat is oak canyons, chaparral, and yellow-pine forest.

4.1.5.2 Sensitive Invertebrates

One sensitive invertebrate species was identified in the Dulzura parcels. One other sensitive invertebrate species has the potential to occur. These species are discussed below.

a. Observed

Quino checkerspot butterfly (*Euphydryas editha quino*) — This species is federally listed as endangered and is an MSCP-covered species. This species was observed within openings within sparse chamise chaparral in the Dulzura parcels (Photograph 19).

b. Not Observed

Thorne's hairstreak butterfly (*Mitoura thornei*) — an MSCP-covered species. This species is an MSCP-covered species. This species was not surveyed for during the baseline surveys. This species has high potential to occur within the Dulzura parcels due to the presence of its host plant, Tecate cypress.

4.1.5.3 Sensitive Reptiles

Three sensitive reptilian species were identified in the Dulzura parcels. These species are discussed below.

a. Observed

Red diamond rattlesnake (*Crotalus ruber*). This species is a CDFG species of special concern. This species was observed in coastal sage-chaparral transition in the Dulzura parcels.

Coast horned lizard (*Phrynosoma blainvillii*). This species is a CDFG species of special concern. This species was observed in Diegan coastal sage scrub, southern mixed chaparral, chamise chaparral, and coastal sage-chaparral transition.

Two-striped gartersnake (*Thamnophis hammondii*). This species is a CDFG species of special concern. This species was observed in southern riparian scrub in the Dulzura parcels (Photograph 20).

PHOTOGRAPH 19
Quino Checkerspot (*Euphydryas editha quino*) Incidentally
Observed in the Northwestern Portion of Dulzura

PHOTOGRAPH 20
Two-striped Gartersnake (*Thamnophis hammondii*)
Found in Seasonal Drainages at Dulzura

4.1.5.4 Sensitive Birds

Four sensitive avian species were identified in the Dulzura parcels. One other sensitive avian species has the potential to occur. These species are discussed below.

a. Observed

Cooper's hawk (*Accipiter cooperii*) — an MSCP-covered species. This species is a CDFG species of special concern and is an MSCP-covered species. This species was observed in open coast live oak woodland in the Dulzura parcels.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) — an MSCP-covered species. This species is a CDFG species of special concern and is an MSCP-covered species. This species was observed in Diegan coastal sage scrub, chamise chaparral, and non-native grassland in the Dulzura parcels.

Grasshopper sparrow (*Ammodramus savannarum perpallidus*). This species is a CDFG species of special concern and is an MSCP-covered species. This species was observed in coastal sage scrub and non-native grassland in the Dulzura parcels.

Western bluebird (*Sialia mexicana occidentalis*) — an MSCP-covered species. This species is a CDFG species of special concern and is an MSCP-covered species. This species was observed in open coast live oak woodland.

California horned lark (*Eremophila alpestris actia*). This species is a CDFG watch list species. This species was observed in Diegan coastal sage scrub in the Dulzura parcels.

b. Not Observed

Coastal California gnatcatcher (*Polioptila californica californica*) — an MSCP-covered species. The coastal California gnatcatcher is a federally listed threatened species, a CDFG species of special concern, and an MSCP-covered species. This species has a moderate potential to occur in the Dulzura parcels. This species was observed within the Dulzura parcels in 2000, prior to the 2003 and 2007 fires (State of California 2011e). This species is expected to recover in the area as suitable coastal sage scrub habitats recover.

4.1.5.5 Sensitive Mammals

One sensitive mammalian species was identified in the Dulzura parcels. Six other sensitive mammalian species have the potential to occur. These species are discussed below.

a. Observed

Southern mule deer (*Odocoileus hemionus fuliginata*) — an MSCP-covered species. This species is an MSCP-covered species. This species was observed in non-native grassland, Diegan coastal sage scrub, open coast live oak woodland, and southern mixed chaparral. Signs of mule deer occurrence were also observed in chamise chaparral, southern interior cypress forest, and valley needlegrass grassland.

b. Not Observed

Pallid bat (*Antrozous pallidus*). This species is a CDFG species of special concern and is also considered sensitive by the Bureau of Land Management (BLM) and the U.S. Forest Service. This species was not observed during the baseline surveys. This species has a high potential for occurrence in the Dulzura parcels. This species is known to occur within two miles of the Dulzura parcels. Preferred habitat includes rocky outcrops and oaks for roosting and grasslands for foraging (Navo 2005). These habitats are present in the Dulzura parcels within the pallid bat's known range.

Western mastiff bat (*Eumops perotis californicus*). This species is a CDFG species of special concern and is considered sensitive by the BLM. This species was not observed during the baseline surveys. This species has a high potential for occurrence in the Dulzura parcels, as it has previously been observed within the Dulzura parcels (State of California 2011b). Preferred habitat includes chaparral, oak woodlands, and grassland for foraging (Navo 2005). These habitats are present in the Dulzura parcels within the western mastiff bat's known range.

Western small-footed myotis (*Myotis ciliolabrum*). This species is considered sensitive by the BLM. This species was not observed during the baseline surveys. This species has a high potential for occurrence in the Dulzura parcels as it has previously been observed within the Dulzura parcels (State of California 2011b). Preferred habitat includes rocky outcrops for roosting and chaparral and riparian habitats for foraging (Navo 2005). These habitats are present in the Dulzura parcels within the western small-footed myotis' known range.

Long-eared myotis (*Myotis evotis*). This species is considered sensitive by the BLM. This species was not observed during the baseline surveys. This species has a high potential for occurrence in the Dulzura parcels. This species is known to occur within two miles of the Dulzura parcels. Preferred habitat includes rocky outcrops and trees for

roosting and sage scrub and chaparral for foraging (Navo 2005). These habitats are present in the Dulzura parcels within the long-eared myotis' known range.

Yuma myotis (*Myotis yumanensis*). This species is considered sensitive by the BLM. This species was not observed during the baseline surveys. This species has a high potential for occurrence in the Dulzura parcels, as it has previously been observed within the Dulzura parcels (State of California 2011b). Preferred habitat includes trees for roosting, scrublands and riparian habitats for foraging, and permanent water sources such as lakes and streams (Navo 2005). These habitats are present in the Dulzura parcels within the yuma myotis' known range.

Pocketed free tail bat (*Nyctinomops femorosaccus*). This species is a CDFG species of special concern. This species was not observed during the baseline surveys. This species has a high potential for occurrence in the Dulzura parcels as it has previously been observed within the Dulzura parcels (State of California 2011b). Preferred habitat includes rocky outcrops, slopes, and shrublands (Navo 2005). These habitats are present in the Dulzura parcels within the pocketed free tail bat's known range.

4.1.6 Invasive Exotic Plant Species

Forty non-native plant species were documented in the Dulzura parcels. Under the California Invasive Plant Inventory Database established by the California Invasive Plant Council (2006), non-native weed species are ranked according to ecological impacts, invasive potential, and distribution.

Non-native weed species ranked as 'high' have severe ecological impacts, moderate to high rates of dispersal and establishment, and are widely distributed. Four plant species documented in the Dulzura parcels are ranked as 'high' under the California Invasive Plant Inventory Database: red brome, purple pampas grass (*Cortaderia jubata*), fennel (*Foeniculum vulgare)*, and saltcedar (*Tamarix ramosissima*).

- Red brome is an exotic annual grass that is spreading into desert shrubland, three-needle pine woodlands, pinyon pine-juniper, and coastal scrub communities. Increased fire frequency favors red brome establishment by reducing competition from native species and converts these communities to annual grasslands (DiTomaso, et al, 2007). Populations of red brome were identified in grassland, coastal sage-chaparral transition, southern mixed chaparral, Diegan coastal sage scrub, and drainages in the Dulzura parcels.

- Purple pampas grass is an exotic perennial grass that is characterized by large plumes that can produce up to 100,000 seeds each. Purple pampas grass favors disturbed sites, particularly sites with bare ground and sandy soils, and inhabits coastal shrub, grassland, dunes, and bluffs communities (DiTomaso, et al, 2007). Populations of purple pampas grass were identified in southern riparian scrub

and in areas of other vegetation communities located adjacent to drainages in the Dulzura parcels.

- Fennel is a perennial herb that forms dense stands in grasslands, wetlands, riparian, and coastal scrub communities that can exclude native vegetation (DiTomaso, et al, 2007). Populations of fennel were identified in drainages in the Dulzura parcels.

- Saltcedar is a small tree or shrub that can be found along streams, lake shores, and desert springs. Saltcedar reduces groundwater and surface water availability and increases salinity in soils, flooding, and fire frequency. Populations of saltcedar were identified in southern riparian scrub in the Dulzura parcels.

Non-native weed species ranked as 'moderate' have substantial, but generally not severe, ecological impacts, moderate to high rates of dispersal and establishment, and limited to widespread distribution. In general, successful establishment of weed species ranked as 'moderate' is dependent upon ecological disturbance. Ten plant species documented in the Dulzura parcels are ranked as 'moderate' under the California Invasive Plant Inventory Database: slender wild oat, purple falsebrome, ripgut grass, artichoke thistle (*Cyanara cardunculus*), stinkwort (*Dittrichia graveolens)*, short-pod mustard (*Hirschfeldia incana*), Italian ryegrass, tree tobacco (*Nicotiana glauca*), canary grass (*Phalaris aquatic*), and fescue.

- Stinkwort has an 'alert' designation indicating that it has high potential for invasion into wildlands. Stinkwort is an annual herb that favors disturbance and can be found in riparian woodlands, washes, and tidal marshes. Stinkwort appears to be expanding its range in California rapidly (DiTomaso, et al, 2007). Populations of stinkwort were identified near the urban/developed areas, along drainages, non-native grassland, and oak woodland borders in the Dulzura parcels.

Non-native weed species ranked as 'limited' have minor ecological impacts, moderate to low rates of dispersal and establishment, and generally limited distribution. However, these species are still considered invasive and can be both persistent and problematic. Nine plant species documented in the Dulzura parcels are ranked as 'limited' under the California Invasive Plant Inventory Database: soft chess, Italian thistle (*Carduus pycnocephalus*), brass buttons (*Cotula coronopifolia*), red stemmed filaree (*Erodium cicutarium*), California bur clover (*Medicago polymorpha*), pokeweed (*Phytolacca americana*), smilo grass (*Piptatherum miliaceum*), annual beard grass (*Polypogon monspeliensis*), and curly dock (*Rumex crispus*).

Non-native weed species categorized as 'evaluated but not listed' either do not presently have significant impacts or information is not sufficient enough to assign a rating. Three plant species documented in the Dulzura parcels were categorized as 'evaluated but not

listed': blue-eye cape-marigold (*Dimorphotheca sinuate*), long-beak filaree (*Erodium botrys*), and prickly sow thistle (*Sonchus asper*). Eleven species documented in the Dulzura parcels have not been evaluated or listed by the California Invasive Plant Council: scarlet pimpernel (*Anagallis arvensis*), poverty brome (*Bromus sterilis)*, star-thistle (*Centaurea melitensis*), petty spurge (*Euphorbia peplus*), nit grass (*Gastridium ventricosum*), crete weed (*Hedypnois cretica*), goldentop (*Lamarckia aurea*), narrow-leaf herba impia (*Logfia gallica*), windmill pink (*Silene gallica*), common sow thistle (*Sonchus oleraceus*), and sandspurry (*Spergularia* sp.).

4.1.7 Other Survey Results

4.1.7.1 Drainages

The Dulzura parcels are located in the Otay River watershed and contain six drainages total. Two drainages feed into Little Cedar Canyon and two drainages feed into Cedar Canyon. Little Cedar Canyon is a drainage for Jamul Creek and Cedar Canyon is a drainage for Dulzura Creek. Dulzura Creek is a tributary to Jamul Creek. Both are located outside the northwestern boundary of the Dulzura parcels and flow into the Lower Otay Reservoir. The Otay River flows from the Lower Otay Reservoir and eventually discharges into the San Diego Bay (County of San Diego 2006).

4.1.7.2 Wildlife Movement Corridor

Barriers to wildlife movement surrounding the Dulzura parcels include Otay Lakes Road to the north, Highway 94 to the east, and the U.S.-Mexico Border Fence to the south. No barriers to wildlife movement occur within the Dulzura parcels, allowing wildlife to move freely throughout.

4.1.7.3 Dumping, Trespassing, and Vagrant Encampments

Small quantities of trash and debris were observed within the Dulzura parcels. Trespassing from illegal off-roading vehicles was observed through tread marks. No vagrant encampments were observed.

Access issues are actively being managed by the Preserve Steward/Biologist (PSB).The Preserve Owner/Manager (POM), PSB, United States Customs and Border Protection, U.S. Fish and Wildlife Service, and CDFG that use the Minnewawa truck trail that intersects the Dulzura parcels (Photograph 21) are scheduled to meet on January 20, 2011, to resolve access issues from land managers. The PSB is also scheduled to participate in monthly border management meetings organized by the BLM to resolve access issue at the Dulzura parcels.

PHOTOGRAPH 21
Off-road Vehicle Traffic Causing Erosion
Along the Minnewanna Truck Trail

RECON

5.0 Discussion

5.1 Survey Recommendations

5.1.1 Quino Checkerspot Butterfly Surveys

During preliminary site visits in March 2011 to check access for the baseline surveys, Quino checkerspot butterfly was incidentally observed at the Dulzura parcels. A notification letter was prepared and submitted to the U.S. Fish and Wildlife Service describing the locations of these incidental sightings. Based on these sightings and observation of suitable habitat during the baseline surveys, the PSB recommends that focused Quino checkerspot butterfly surveys be conducted in spring 2012 to determine the extent of occupied habitat within the Dulzura parcels. The Quino checkerspot butterfly flight season does not consist of a set range of dates, but is determined by the growth and condition of the host plants used by Quino checkerspot butterfly. Therefore, the date for initiating and completing surveys cannot be predetermined. A post-survey report detailing the results of the Quino checkerspot butterfly surveys will be submitted to the POM prior to June 30, 2012.

5.1.2 Photo Point Monitoring

The PSB recommends establishing permanent photo monitoring points so that changes in native vegetation and weed cover can be detected over time. Photo monitoring points will be established at the Dulzura parcels in spring 2012 and shall be completed by May 15, 2012. Photo points represent the first phase of long-term vegetation monitoring within the Preserve. The photo point monitoring locations will be determined in the field and recorded using a hand held Trimble® GPS unit. The photo monitoring points will be repeated a minimum of every three years.

The photo monitoring point locations will be chosen so that they provide a broad view of representative vegetation communities in the Preserve. The GPS accuracy and direction of the photos will be recorded. Prominent features will be mindfully placed in each photo to make relocating the exact location easier in future years. The prominent features will be chosen so that changes to the landscape (i.e., fire or weed encroachment) will minimize change to the visibility of the feature. Photo points may also be established along habitat ecotones to monitor habitat shifts in elevation. Additional photo monitoring point locations may be added in the future.

Focused long-term vegetation sampling will be conducted using more rigorous methods once California gnatcatcher study areas are established per the Otay Ranch Phase 2

Resource Management Plan. The PSB may utilize vegetation monitoring methods developed by San Diego State University to detect changes in vegetation over time at the Preserve. The San Diego State University vegetation methods will be incorporated into the consistency analysis for the RMP, as appropriate.

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ATTACHMENTS

ATTACHMENT 1

ATTACHMENT 1
DULZURA PARCELS — GENERAL PLANT SPECIES OBSERVED

Scientific Name	Common Name	Origin
SELAGINELLACEAE	**SPIKE-MOSS FAMILY**	
Selaginella bigelovii L. Underw.	Bigelow spike-moss	N
Selaginella cinerascens A.A. Eaton	ashy spike-moss	N
POLYPODIACEAE	**POLYPODY FAMILY**	
Polypodium californicum Kaulf.	California polypody	N
PTERIDACEAE	**BRAKE FAMILY**	
Adiantum capillus-veneris L.	southern maiden-hair	N
Adiantum jordanii Mull. Hal.	California maiden-hair	N
Aspidotis californica (Hook.) Copel.	California lace fern	N
Cheilanthes parryi (D.C. Eaton) Domin	Parry's cloak fern	N
Pellaea andromedifolia (Kaulf.) Fee	coffee fern	N
Pellaea mucronata (D. C. Eaton) D. C. Eaton var. *mucronata*	bird's-foot fern	N
Pentagramma triangularis (Kaulf.) Yatsk., Windham & E. Wollenw.	goldback fern	N
CUPRESSACEAE	**CYPRESS FAMILY**	
Hesperocyparis forbesii (Jeps.) Bartel [=*Callitropsis forbesii*]	Tecate cypress	N
SAURURACEAE	**LIZARD'S TAIL FAMILY**	
Anemopsis californica (Nutt.) Hook. & Arn.	yerba mansa	N
AGAVACEAE	**AGAVE FAMILY**	
Chlorogalum parviflorum S. Watson	small flower soap plant	N
Yucca whipplei Torr.	our Lord's candle	N
ALLIACEAE	**ONION FAMILY**	
Allium peninsulare Lemmon ex Greene var. *peninsulare*	red-flowered onion	N
CYPERACEAE	**SEDGE FAMILY**	
Carex spissa L.H. Bailey	San Diego sedge	N
Eleocharis parishii Britton	Parish's spike rush	N
Scirpus microcarpus J. Presl & C. Presl	small-fruited bulrush	N
IRIDACEAE	**IRIS FAMILY**	
Sisyrinchium bellum S. Watson	blue-eyed-grass	N
JUNCACEAE	**RUSH FAMILY**	
Juncus balticus L.	Baltic rush	N
Juncus dubius Engelm.	Mariposa rush	N

ATTACHMENT 1
DULZURA PARCELS — GENERAL PLANT SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Origin
LILIACEAE	**LILY FAMILY**	
Calochortus dunnii Purdy	Dunn's mariposa lily	N
Calochortus splendens Benth.	lilac mariposa lily	N
Calochortus weedii A.W. Wood var. *weedii*	weed mariposa lily	N
ORCHIDACEAE	**ORCHID FAMILY**	
Piperia cooperi (S. Watson) Rydb.	chaparral rein-orchid, Cooper's rein orchid	N
POACEAE (GRAMINEAE)	**GRASS FAMILY**	
Achnatherum coronatum (Thurb.) Barkworth	giant stipa	N
Achnatherum diegoense (Swallen) Barkworth	San Diego County needlegrass	N
Avena barbata Link	slender wild oat	I
Brachypodium distachyon (L.) P. Beauv.	purple falsebrome	I
Bromus diandrus Roth	ripgut grass	I
Bromus hordeaceus L.	soft chess	I
Bromus madritensis L. ssp. *rubens* (L.) Husnot	red brome	I
Bromus sterilis L.	barren brome, poverty brome	I
Cortaderia jubata (Lemoine) Stapf	purple pampas grass	I
Distichlis spicata (L.) Greene	saltgrass	N
Elymus elymoides (Raf.) Swezey	squirreltail	N
Gastridium ventricosum (Gouan) Schinz & Thell.	nit grass	I
Hordeum jubatum L.	foxtail barley	N
Lamarckia aurea (L.) Moench	goldentop	I
Lolium multiflorum Lam.	Italian ryegrass	I
Melica imperfecta Trin.	California melic	N
Muhlenbergia rigens (Benth.) Hitchc.	deergrass	N
Nassella lepida (Hitchc.) Barkworth	foothill needlegrass	N
Nassella pulchra (Hitchc.) Barkworth	purple needlegrass	N
Phalaris aquatica L.	Harding grass; canary grass	I
Piptatherum [=*Oryzopsis*] *miliaceum* (L.) Coss.	smilo grass	I
Polypogon monspeliensis (L.) Desf.	annual beard grass	I
Vulpia myuros (L.) C.C. Gmel	rattail fescue	I
THEMIDACEAE	**BRODIAEA FAMILY**	
Dichelostemma capitatum (Benth.) A.W. Wood	blue dicks	N
Muilla clevelandii (S. Watson) Hoover	San Diego goldenstar	N

ATTACHMENT 1
DULZURA PARCELS — GENERAL PLANT SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Origin
TYPHACEAE	**CATTAIL FAMILY**	
Typha sp.	cattail	N
ADOXACEAE	**ADOXA FAMILY**	
Sambucus nigra [=*mexicana*] L. ssp. *caerulea* (Raf.) Bolli	blue elderberry	N
ANACARDIACEAE	**SUMAC OR CASHEW FAMILY**	
Malosma laurina Nutt. ex Abrams	laurel sumac	N
Rhus aromatica [=*Rhus trilobata*] Aiton	skunk bush	N
Rhus integrifolia (Nutt.) Benth. & Hook. f. ex Rothr.	lemonadeberry	N
Rhus ovata S. Watson	sugar bush	N
Toxicodendron diversilobum (Torr. & A. Gray) Greene	western poison oak	N
APIACEAE (UMBELLIFERAE)	**CARROT FAMILY**	
Apiastrum angustifolium Nutt.	wild-celery	N
Daucus pusillus Michx.	rattlesnake weed	N
Foeniculum vulgare Mill.	fennel	I
Sanicula arguta J.M. Coult. & Rose	little-jim sanicle	N
APOCYNACEAE	**DOGBANE FAMILY**	
Asclepias fascicularis Decne.	narrow-leaf milkweed	N
ASTERACEAE	**SUNFLOWER FAMILY**	
Achillea millefolium L.	yarrow, milfoil	N
Acourtia microcephala DC.	purple-head, sacapellote	N
Ambrosia [=*Hymenoclea*] *monogyra* (A. Gray) Strother & B.G. Baldwin	desert fragrance	N
Ambrosia psilostachya DC.	western ragweed	N
Artemisia californica Less.	California sagebrush	N
Baccharis pilularis DC.	coyote brush	N
Baccharis salicifolia (Ruiz & Pav.) Pers.	mule fat, seep-willow	N
Baccharis sarothroides A. Gray	broom baccharis	N
Bahiopsis [=*Viguiera*] *laciniata* (A. Gray) E.E. Schilling & Panero	San Diego County viguiera	N
Brickellia californica (Torr. & A. Gray) A. Gray	California brickellbush	N
Carduus pycnocephalus L.	Italian thistle	I
Centaurea melitensis L.	tocolote, star-thistle	I
Cirsium occidentale (Nutt.) Jeps. var. *californicum* (A. Gray) D.J. Keil & C.E. Turner	California thistle	N
Conyza canadensis (L.) Cronquist	horseweed	N

ATTACHMENT 1
DULZURA PARCELS — GENERAL PLANT SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Origin
Corethrogyne filaginifolia [= all previously known *Lessingia filaginifolia* varieties in California] (Hook. & Arn.) Nutt.	California-aster	N
Cotula coronopifolia L.	brass-buttons	I
Cynara cardunculus L.	cardoon, artichoke thistle	I
Deinandra [=*Hemizonia*] *fasciculata* (DC.) Greene	golden tarplant	N
Dimorphotheca sinuata DC.	blue-eye cape-marigold	I
Dittrichia graveolens (L.) Greuter	stinkwort	I
Encelia californica Nutt.	common encelia	N
Erigeron foliosus Nutt.	leafy fleabane	N
Eriophyllum confertiflorum (DC.) A. Gray var. *confertiflorum*	golden-yarrow	N
Gnaphalium californicum DC.	green everlasting	N
Gutierrezia californica (DC.) Torr. & A. Gray	California matchweed	N
Hazardia squarrosa (Hook. & Arn.) Greene	saw-toothed goldenbush	N
Hedypnois cretica (L.) Dum. Cours.	crete weed	I
Heterotheca grandiflora Nutt.	telegraph weed	N
Hypochaeris glabra L.	smooth cat's-ear	I
Isocoma menziesii (Hook. & Arn.) G. L. Nesom var. *decumbens* (Greene) G. L. Nesom	decumbent goldenbush	N
Iva hayesiana A. Gray	San Diego marsh-elder	N
Lactuca serriola L.	prickly lettuce	I
Layia glandulosa (Hook.) Hook. & Arn.	white layia	N
Layia platyglossa (Fisch. & C.A. Mey.) A. Gray	tidy-tips	N
Logfia [=*Filago*] *gallica* (L.) Cross. & Germ.	narrow-leaf herba impia	I
Osmadenia tenella Nutt.	osmadenia	N
Porophyllum gracile Benth.	odora	N
Pseudognaphalium beneolens [=*Gnaphalium canescens* ssp. *beneolens*] (Davidson) Anderb.	fragrant everlasting	N
Pseudognaphalium canescens [=*Gnaphalium canescens* ssp. *canescens*] (DC.) Anderb.	everlasting cudweed	N
Psilocarphus tenellus Nutt.	slender woolly marbles	N
Silybum marianum (L.) Gaertn.	milk thistle	I
Solidago sp.	goldenrod	N
Sonchus asper (L.) Hill ssp. *asper*	prickly sow thistle	I
Sonchus oleraceus L.	common sow thistle	I

ATTACHMENT 1
DULZURA PARCELS — GENERAL PLANT SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Origin
Stylocline gnaphaloides Nutt.	everlasting nest straw	N
Uropappus lindleyi (DC.) Nutt.	silver puffs	N
Venegasia carpesioides DC.	Jesuit flower	N
BORAGINACEAE	**BORAGE FAMILY**	
Cryptantha sp.	cryptantha	N
Phacelia cicutaria Greene var. *hispida* (A. Gray) J.T. Howell	caterpillar phacelia	N
Pholistoma racemosum (Nutt. ex A. Gray) Constance	pholistoma	N
BRASSICACEAE (CRUCIFERAE)	**MUSTARD FAMILY**	
Hirschfeldia incana (L.) Lagr.-Fossat	short-pod mustard	I
Thysanocarpus curvipes Hook.	lacepod, fringepod	N
CACTACEAE	**CACTUS FAMILY**	
Ferocactus viridescens (Torr. & A. Gray) Britton & Rose	San Diego barrel cactus	N
CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**	
Lonicera subspicata Hook. & Arn.	southern honeysuckle	N
Silene gallica L.	windmill pink	I
Spergularia sp.	XXX	I
Chenopodium californicum (S. Watson) S. Watson	California pigweed	N
CISTACEAE	**ROCK-ROSE FAMILY**	
Helianthemum scoparium Nutt.	peak rush-rose	N
CONVOLVULACEAE	**MORNING-GLORY FAMILY**	
Calystegia macrostegia (Greene) Brummitt	chaparral morning-glory	N
Cuscuta californica Hook. & Arn.	dodder	N
Cuscuta subinclusa Durand & Hilg.	dodder	N
Dichondra occidentalis House	western dichondra	N
CRASSULACEAE	**STONECROP FAMILY**	
Crassula connata (Ruiz & Pav.) A. Berger	pygmy-weed	N
Dudleya edulis (Nutt.) Moran	lady fingers	N
Dudleya pulverulenta (Nutt.) Britton & Rose	chalk lettuce, chalk dudleya	N
CROSSOSOMATACEAE	**CROSSOSOMA FAMILY**	
CUCURBITACEAE	**GOURD FAMILY**	
Cucurbita foetidissima Kunth	calabazilla	N
Marah macrocarpus (Greene) Greene	wild cucumber	N

ATTACHMENT 1
DULZURA PARCELS — GENERAL PLANT SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Origin
DATISCACEAE	**DATISCA FAMILY**	
Datisca glomerata (C. Presl) Baill.	Durango root	N
ERICACEAE	**HEATH FAMILY**	
Arctostaphylos glandulosa Eastw. ssp. *glandulosa*	Eastwood's manzanita	N
Arctostaphylos otayensis Weisl. & B. Schreib.	Otay manzanita	N
Xylococcus bicolor Nutt.	mission manzanita	N
Chamaesyce albomarginata (Torr. & A. Gray) Small	rattlesnake weed	N
Croton [=*Eremocarpus*] *setigerus* Hook.	dove weed	N
Euphorbia peplus L.	petty spurge	I
FABACEAE (LEGUMINOSAE)	**LEGUME FAMILY**	
Acmispon americanus (Nutt.) Rydb. var. *americanus* [=*Lotus purshianus* var. *purshianus*]	Spanish-clover	N
Acmispon glaber (Vogel) Brouillet [=*Lotus scoparius*]	deerweed	N
Acmispon heermannii (Durand & Hilg.) Brouillet var. *heermannii* [=*Lotus heermannii* var. *heermannii*]	Heermann's lotus	N
Acmispon maritimus (Torr. & A. Gray) D.D. Sokoloff [=*Lotus salsuginosus*]	lotus	N
Acmispon micranthus (Torr. & A. Gray) Brouillet [=*Lotus hamatus*]	grab lotus	N
Lathyrus vestitus Nutt. var. *alefeldii* (T. G. White) Isely	wild sweet pea	N
Lupinus bicolor Lindl.	miniature lupine	N
Lupinus concinnus J. Agardh	bajada lupine	N
Lupinus truncatus Nutt.	chaparral lupine	N
Medicago polymorpha L.	California bur clover	I
Pickeringia montana Nutt.	Montana chaparral-pea	N
Trifolium microcephalum Pursh	small-headed clover	N
Trifolium willdenovii Spreng.	tomcat clover	N
Vicia americana Willd. var. *americana*	American vetch	N
Vicia ludoviciana Nutt. var. *ludoviciana*	deerpea vetch	N
FAGACEAE	**OAK FAMILY**	
Quercus agrifolia Née var. *agrifolia*	coast live oak, encina	N
Quercus berberidifolia Liebm.	scrub oak	N
Quercus dumosa Nutt.	Nuttall's scrub oak	N
Quercus engelmannii Greene	Engelmann oak, mesa oak	N

ATTACHMENT 1
DULZURA PARCELS — GENERAL PLANT SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Origin
GENTIANACEAE	**GENTIAN FAMILY**	
Zeltnera [=*Centaurium*] *venusta* (A. Gray) G. Mans.	canchalagua	N
GERANIACEAE	**GERANIUM FAMILY**	
Erodium botrys (Cav.) Bertol.	long-beak filaree	I
Erodium cicutarium (L.) L'Hér. ex Aiton	red stemmed filaree	I
GROSSULARIACEAE	**GOOSEBERRY FAMILY**	
Ribes malvaceum Sm. var. *viridifolium* Abrams	chaparral currant	N
LAMIACEAE	**MINT FAMILY**	
Lepechinia ganderi Epling	Gander's pitcher sage	N
Salvia apiana Jeps.	white sage	N
Stachys ajugoides Benth. var. *rigida* (Nutt. ex Benth.) Jeps. & Hoover	hedge nettle	N
LYTHRACEAE	**LOOSESTRIFE FAMILY**	
Lythrum californicum Torr. & A. Gray	California loose-strife	N
MALVACEAE	**MALLOW FAMILY**	
Fremontodendron mexicanum Davidson	Mexican flannelbush	N
Malacothamnus fasciculatus (Nutt. ex Torr. & A. Gray) Greene	chaparral mallow	N
Sidalcea sparsifolia (C. L. Hitchc.) S. R. Hill	checker-bloom	N
MONTIACEAE	**MONTIA FAMILY**	
Claytonia parviflora Hook. ssp. *parviflora*	Utah miner's-lettuce	N
MYRSINACEAE		
Anagallis arvensis L.	scarlet pimpernel, poor-man's weatherglass	I
Mirabilis laevis [=*californica*] (Benth.) Curran var. *crassifolia* (Choisy) Spellenb.	wishbone bush	N
ONAGRACEAE	**EVENING-PRIMROSE FAMILY**	
Clarkia delicata (Abrams) A. Nelson & J.F. Macbr.	delicate clarkia, Campo clarkia	N
Clarkia epilobioides (Nutt. ex Torr. & A. Gray) A. Nelson & J.F. Macbr.	willow herb clarkia, canyon clarkia	N
Clarkia purpurea (Curtis) A. Nelson & J.F. Macbr. ssp. *quadrivulnera* (Douglas ex Lindl.) H. Lewis & M. Lewis	four-spot	N
Epilobium canum (Greene) P.H. Raven	California fuchsia, zauschneria	N
OROBANCHACEAE	**BROOM-RAPE FAMILY**	
Orobanche bulbosa G. Beck	broom-rape	N

ATTACHMENT 1
DULZURA PARCELS — GENERAL PLANT SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Origin
OXALIDACEAE	**OXALIS FAMILY**	
Oxalis corniculata L. ssp. *pilosa* (Nutt.) Lourteig [=*Oxalis albicans* ssp. *pilosa*]	hairy oxalis	N
PAEONIACEAE	**PEONY FAMILY**	
Paeonia californica Nutt.	California peony	N
PAPAVERACEAE	**POPPY FAMILY**	
Dendromecon rigida Benth.	bush poppy	N
Eschscholzia californica Cham.	California poppy	N
Romneya trichocalyx Eastw.	hairy matilija poppy	N
PHRYMACEAE [=SCROPHULARIACEAE]	**HOPSEED FAMILY**	
Mimulus aurantiacus Curtis	low bush monkey-flower	N
Mimulus clevelandii Brandegee	Cleveland's bush monkey-flower	N
Mimulus guttatus DC.	common monkey-flower	N
PHYTOLACCACEAE	**POKEWEED FAMILY**	
Phytolacca americana L.	pokeweed, pokeberry, pigeonberry	I
PLANTAGINACEAE	**PLANTAIN FAMILY**	
Antirrhinum nuttallianum Benth. ex A. DC.	Nuttall snapdragon	N
Collinsia heterophylla Buist ex Graham	Chinese houses	N
Keckiella antirrhinoides (Benth.) Straw var. *antirrhinoides*	yellow bush penstemon	N
Keckiella cordifolia (Benth.) Straw	climbing bush penstemon	N
PLATANACEAE	**PLANE TREE OR SYCAMORE FAMILY**	
Platanus racemosa Nutt.	western sycamore	N
POLEMONIACEAE	**PHLOX FAMILY**	
Leptosiphon parviflorus L.	coast baby-star; variable linanthus	N
Linanthus dianthiflorus (Benth.) Greene	farinose ground pink	N
POLYGONACEAE	**BUCKWHEAT FAMILY**	
Chorizanthe fimbriata Nutt.	fringed spineflower	N
Eriogonum fasciculatum Benth. var. *foliolosum* (Nutt.) S. Stokes ex Abrams	inland California buckwheat	N
Pterostegia drymarioides Fisch. & C.A. Mey.	California thread-stem	N
Rumex crispus L.	curly dock	I
Rumex salicifolius Weinm.	willow dock	N

ATTACHMENT 1
DULZURA PARCELS — GENERAL PLANT SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Origin
RANUNCULACEAE	**BUTTERCUP FAMILY**	
Clematis ligusticifolia Nutt.	yerba de chiva, virgin's bower	N
Delphinium cardinale Hook.	scarlet larkspur, cardinal larkspur	N
Delphinium parryi A. Gray	blue larkspur	N
Thalictrum fendleri Engelm. ex A. Gray	Fendler's meadow-rue	N
RHAMNACEAE	**BUCKTHORN FAMILY**	
Ceanothus tomentosus Parry	Ramona-lilac	N
Ceanothus oliganthus Nutt.	hairy ceanothus	N
Rhamnus crocea Nutt.	spiny redberry	N
ROSACEAE	**ROSE FAMILY**	
Adenostoma fasciculatum Hook. & Arn.	chamise	N
Cercocarpus minutiflorus Abrams	mountain-mahogany	N
Chamaebatia australis (Brandegee) Abrams	Southern mountain misery	N
Heteromeles arbutifolia (Lindl.) M. Roem.	toyon, Christmas berry	N
Prunus ilicifolia (Nutt. ex Hook. & Arn.) Walp. ssp. *ilicifolia*	holly-leafed cherry, islay	N
RUBIACEAE	**MADDER OR COFFEE FAMILY**	
Galium angustifolium A. Gray ssp. *angustifolium*	narrow-leaf bedstraw	N
Galium aparine L.	goose grass, stickywilly	N
SALICACEAE	**WILLOW FAMILY**	
Salix gooddingii C.R. Ball.	Goodding's black willow	N
Salix exigua Nutt.	Narrow-leaf willow	N
Salix laevigata Bebb	red willow	N
Salix lasiolepis Benth.	arroyo willow	N
SCROPHULARIACEAE	**FIGWORT FAMILY**	
Castilleja exserta (A.A. Heller) T.I. Chuang & Heckard	purple owl's clover	N
Castilleja foliolosa Hook. & Arn.	woolly Indian paintbrush	N
Scrophularia californica Cham. & Schltdl.	California figwort	N
SOLANACEAE	**NIGHTSHADE FAMILY**	
Nicotiana glauca Graham	tree tobacco	I
Solanum parishii A. Heller	Parish's nightshade	N
TAMARICACEAE	**TAMARISK FAMILY**	
Tamarix ramosissima Ledeb.	saltcedar	I

ATTACHMENT 1
DULZURA PARCELS — GENERAL PLANT SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Origin
URTICACEAE	**NETTLE FAMILY**	
Parietaria hespera Hinton var. *californica* Hinton	California pellitory	N
VERBENACEAE	**VERVAIN FAMILY**	
Verbena sp.	vervain	N
VIOLACEAE	**VIOLET FAMILY**	
Viola pedunculata Torr. & A. Gray	johnny-jump-up	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. 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

ATTACHMENT 2

ATTACHMENT 2
DULZURA PARCELS — GENERAL WILDLIFE SPECIES OBSERVED

Scientific Name	Common Name	Occupied Habitat	Seasonality (Birds Only)
INVERTEBRATES (Nomenclature from Milne and Milne 1980; Mattoni 1990; and Opler and Wright 1999)			
HESPERIIDAE	**SKIPPERS**		
Erynnis funeralis	funereal duskywing	CSS	
Hylephila phyleus	fiery skipper		
Pyrgus communis	common checkered skipper	CSS	
PAPILIONIDAE	**PARNASSIANS & SWALLOWTAILS**		
Papilio eurymedon	pale swallowtail	CSS, Riparian	
Papilio zelicaon	anise swallowtail	CSS	
PIERIDAE	**WHITES & SULPHURS**		
Anthocharis sara	Sara or Pacific orangetip	CSS, Oak Woodland, Riparian	
	unknown sulphur	Oak Woodland	
Pontia protodice	common or checkered white		
Pieris rapae	cabbage white	CSS, Chaparral, Riparian	
LYCAENIDAE	**BLUES, COPPERS, & HAIRSTREAKS**		
Atlides halesus	great purple hairstreak	Chaparral	
Callophrys dumetorum	bramble or coastal green hairstreak	Chaparral	
Celastrina ladon echo	echo blue or spring azure		
Everes amyntula	western tailed blue		
Glaucopsyche lygdamus australis	southern or silvery blue		
Icaricia acmon acmon	Acmon blue	CSS, Riparian	
	unknown blue	CSS, NNG, Oak Woodland	
NYMPHALIDAE	**BRUSH-FOOTED BUTTERFLIES**		
Chlosyne gabbii	Gabb's checkerspot	CSS, Riparian	
Coenonympha tullia california	California or common ringlet		
Euphydryas editha quino	Quino checkerspot		
Junonia coenia	common buckeye	CSS, Chaparral, Oak Woodland, Riparian	
Limenitis lorquini	Lorquin's admiral	Chaparral	
Phyciodes mylitta	mylitta crescent	NNG	

ATTACHMENT 2
DULZURA PARCELS — GENERAL WILDLIFE SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Occupied Habitat	Seasonality (Birds Only)
Speyeria callippe comstocki	Comstock's frittillary	Riparian	
Speyeria coronis	coronis frittillary	CSS	
Vanessa annabella	west coast lady		
AMPHIBIANS (Nomenclature from Crother 2001 and Crother et al. 2003)			
HYLIDAE	**TREE FROGS**		
Pseudacris regilla	Pacific treefrog	Riparian	
Pseudacris cadaverina	California treefrog	Riparian	*Pseudacris regilla*
REPTILES (Nomenclature from Crother 2008)			
IGUANIDAE	**IGUANID LIZARDS**		
Phrynosoma blainvillii [=*coronatum*]	coast horned lizard	CSS	
Sceloporus occidentalis	western fence lizard	CSS, Chaparral, Riparian	
Uta stansburiana	common side-blotched lizard	CSS	
TEIIDAE	**WHIPTAIL LIZARDS**		
Aspidoscelis tigris stejnegeri	coastal whiptail	Chaparral	
COLUBRIDAE	**COLUBRID SNAKES**		
Pituophis catenifer annectens	San Diego gophersnake	CSS	
Thamnophis hammondii	two-striped gartersnake	Riparian	
CROTALIDAE	**RATTLESNAKES**		
Crotalus ruber	red diamond rattlesnake	Riparian	
BIRDS (Nomenclature from American Ornithologists' Union 1998 and Unitt 2004)			
ODONTOPHORIDAE	**NEW WORLD QUAIL**		
Callipepla californica californica	California quail	Oak Woodland	Y
CATHARTIDAE	**NEW WORLD VULTURES**		
Cathartes aura	turkey vulture	NNG	M, S

ATTACHMENT 2
DULZURA PARCELS — GENERAL WILDLIFE SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Occupied Habitat	Seasonality (Birds Only)
ACCIPITRIDAE	**HAWKS, KITES, & EAGLES**		
Accipiter cooperii	Cooper's hawk	Oak Woodland	Y
Buteo jamaicensis	red-tailed hawk	Flying overhead, Oak Woodland, NNG	Y
Buteo lineatus elegans	red-shouldered hawk	Oak Woodland	Y
Circus cyaneus hudsonius	northern harrier	NNG	Y
FALCONIDAE	**FALCONS & CARACARAS**		
Falco sparverius sparverius	American kestrel	Riparian, Oak Woodland	Y
COLUMBIDAE	**PIGEONS & DOVES**		
Zenaida macroura marginella	mourning dove	CSS, Chaparral, Oak Woodland	Y
CUCULIDAE	**CUCKOOS & ROADRUNNERS**		
Geococcyx californianus	greater roadrunner	CSS, Chaparral	Y
TYTONIDAE	**BARN OWLS**		
Tyto alba pratincola	common barn owl	Oak Woodland	Y
STRIGIDAE	**TYPICAL OWLS**		
Bubo virginianus	great horned owl	Oak Woodland	Y
CAPRIMULGIDAE	**GOATSUCKERS**		
Phalaenoptilus nuttallii	common poorwill	CSS, Chaparral, Oak Woodland	Y
APODIDAE	**SWIFTS**		
Aeronautes saxatalis	white-throated swift	Flying overhead, CSS	Y
TROCHILIDAE	**HUMMINGBIRDS**		
Calypte anna	Anna's hummingbird	CSS, Chaparral, Oak Woodland, NNG	Y
Calypte costae	Costa's hummingbird	CSS, Chaparral, Oak Woodland	S

ATTACHMENT 2
DULZURA PARCELS — GENERAL WILDLIFE SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Occupied Habitat	Seasonality (Birds Only)
PICIDAE	**WOODPECKERS & SAPSUCKERS**		
Melanerpes formicivorus bairdi	acorn woodpecker	CSS, Chaparral, Oak Woodland	Y
Picoides nuttallii	Nuttall's woodpecker	Oak Woodland	Y
TYRANNIDAE	**TYRANT FLYCATCHERS**		
Empidonax difficilis	Pacific slope flycatcher	Oak Woodland, Riparian	S
Empidonax oberholseri	dusky flycatcher	CSS	S
Myiarchus cinerascens cinerascens	ash-throated flycatcher	CSS, Chaparral, Oak Woodland, Riparian	S
Sayornis nigricans semiatra	black phoebe	CSS, Chaparral, Oak Woodland	Y
Sayornis saya	Say's phoebe	CSS	W
Tyrannus verticalis	western kingbird	CSS, Chaparral	S
Tyrannus vociferans vociferans	Cassin's kingbird	CSS, Oak Woodland	Y
VIREONIDAE	**VIREOS**		
Vireo gilvus swainsonii	warbling vireo	Oak Woodland	S
CORVIDAE	**CROWS, JAYS, & MAGPIES**		
Aphelocoma californica	western scrub-jay	CSS, Chaparral, Oak Woodland	Y
Corvus brachyrhynchos hesperis	American crow	CSS, Chaparral, Oak Woodland, Flying overhead, NNG	Y
Corvus corax clarionensis	common raven	Flying overhead, Oak Woodland	Y
ALAUDIDAE	**LARKS**		
Eremophila alpestris	California horned lark	CSS, Chaparral	Y
HIRUNDINIDAE	**SWALLOWS**		
Petrochelidon pyrrhonota tachina	cliff swallow	Flying overhead, CSS, Chaparral	S

ATTACHMENT 2
DULZURA PARCELS — GENERAL WILDLIFE SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Occupied Habitat	Seasonality (Birds Only)
PARIDAE	**CHICKADEES & TITMICE**		
Baeolophus inornatus transpositus	oak titmouse	Oak woodland	Y
AEGITHALIDAE	**BUSHTIT**		
Psaltriparus minimus minimus	bushtit	CSS, Chaparral, Oak Woodland	Y
SITTIDAE	**NUTHATCHES**		
Sitta carolinensis aculeata	white-breasted nuthatch	Oak Woodland	Y
TROGLODYTIDAE	**WRENS**		
Salpinctes obsoletus obsoletus	rock wren	CSS, Chaparral, Oak Woodland	Y
Thryomanes bewickii	Bewick's wren	CSS, Chaparral, Oak Woodland	Y
Troglodytes aedon parkmanii	house wren	CSS, Chaparral, Oak Woodland	Y
REGULIDAE	**KINGLETS**		
Regulus calendula calendula	ruby-crowned kinglet	Oak Woodland	W
SYLVIIDAE	**GNATCATCHERS**		
Polioptila caerulea	blue-gray gnatcatcher	CSS, Chaparral, Oak Woodland	Y
TURDIDAE	**THRUSHES**		
Catharus guttatus	hermit thrush	Oak Woodland	W
Sialia mexicana occidentalis	western bluebird	Oak Woodland, Riparian	W
TIMALIIDAE	**BABBLERS**		
Chamaea fasciata henshawi	wrentit	CSS, Chaparral, Oak Woodland	Y
MIMIDAE	**MOCKINGBIRDS & THRASHERS**		
Mimus polyglottos polyglottos	northern mockingbird	CSS, Chaparral, Oak Woodland	Y

ATTACHMENT 2
DULZURA PARCELS — GENERAL WILDLIFE SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Occupied Habitat	Seasonality (Birds Only)
Toxostoma redivivum redivivum	California thrasher		Y
STURNIDAE	**STARLINGS & MYNAS**		
Sturnus vulgaris	European starling (I)	Oak Woodland, Riparian	Y
PTILOGONATIDAE	**SILKY FLYCATCHERS**		
Phainopepla nitens lepida	phainopepla	CSS, Chaparral, Oak Woodland	Y
PARULIDAE	**WOOD WARBLERS**		
Dendroica coronata	yellow-rumped warbler	CSS, Chaparral, Flying overhead, Oak Woodland	W
Dendroica nigrescens	black-throated gray warbler	Oak Woodland	M
Dendroica townsendi	Townsend's warbler	Oak Woodland	W
Vermivora celata	orange-crowned warbler	CSS, Chaparral, Oak Woodland	Y
Vermivora ruficapilla ridgwayi	Nashville warbler	Oak Woodland, CSS	M
Wilsonia pusilla	Wilson's warbler	Oak Woodland	M
THRAUPIDAE	**TANAGERS**		
Piranga ludoviciana	western tanager	CSS, Chaparral, Oak Woodland	M
EMBERIZIDAE	**EMBERIZIDS**		
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	CSS, Chaparral, NNG, Oak Woodland	Y
Ammodramus savannarum perpallidus	grasshopper sparrow	CSS, Chaparral, Grassland, NNG	Y
Chondestes grammacus strigatus	lark sparrow	CSS, Chaparral, Oak Woodland	Y
Junco hyemalis	dark-eyed junco	Oak Woodland	Y
Melospiza lincolnii	Lincoln's sparrow	CSS, Chaparral	W
Melospiza melodia	song sparrow	Riparian, Oak Woodland, NNG	Y
Pipilo crissalis	California towhee	CSS, Chaparral, Oak Woodland	Y

ATTACHMENT 2
DULZURA PARCELS — GENERAL WILDLIFE SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Occupied Habitat	Seasonality (Birds Only)
Pipilo maculatus	spotted towhee	CSS, Chaparral, Oak Woodland	Y
Spizella atrogularis cana	black-chinned sparrow	CSS, Chaparral	I
Zonotrichia atricapilla	golden-crowned sparrow	CSS, Chaparral	W
Zonotrichia leucophrys	white-crowned sparrow	CSS, Chaparral, Oak Woodland	W
CARDINALIDAE	**CARDINALS & GROSBEAKS**		
Passerina caerulea salicaria	blue grosbeak	CSS, Chaparral, Oak Woodland	S
Passerina amoena	lazuli bunting	CSS, Chaparral, Oak Woodland	C
Pheucticus melanocephalus maculatus	black-headed grosbeak	CSS, Chaparral, Oak Woodland	S
ICTERIDAE	**BLACKBIRDS & NEW WORLD ORIOLES**		
Icterus bullockii	Bullock's oriole	Oak Woodland	S
Molothrus ater	brown-headed cowbird	Oak Woodland	Y
Sturnella neglecta	western meadowlark	CSS, Chaparral, Grassland, NNG	Y
FRINGILLIDAE	**FINCHES**		
Carduelis psaltria hesperophilus	lesser goldfinch	CSS, Chaparral, Oak Woodland	Y
Carpodacus mexicanus frontalis	house finch	CSS, Chaparral, Oak Woodland, Riparian	Y
MAMMALS (Nomenclature from Baker et al. 2003)			
LEPORIDAE	**RABBITS & HARES**		
Sylvilagus audubonii	desert cottontail	CSS, Chaparral, Oak Woodland	
SCIURIDAE	**SQUIRRELS & CHIPMUNKS**		
Spermophilus beecheyi	California ground squirrel	CSS, Oak Woodland	

ATTACHMENT 2
DULZURA PARCELS — GENERAL WILDLIFE SPECIES OBSERVED
(continued)

Scientific Name	Common Name	Occupied Habitat	Seasonality (Birds Only)
HETEROMYIDAE	**POCKET MICE & KANGAROO RATS**		
Dipodomys sp.	unknown kangaroo rat	CSS	
CERVIDAE	**DEER**		
Odocoileus hemionus	Southern mule deer	CSS, Chaparral	

(I) = Introduced species

HABITATS
CSS = Coastal sage scrub
NNG = Non-native grassland

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

ATTACHMENT 3

ATTACHMENT 3
DULZURA PARCELS — SENSITIVE PLANT SPECIES OBSERVED

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
			LYCOPODS		
SELAGINELLACEAE **SPIKE-MOSS FAMILY**					
Selaginella cinerascens Ashy spike-moss	–/–	4.1	--	Perennial rhizomatous herb; chaparral, coastal scrub; elevation 65-2,100 feet.	
			GYMNOSPERMS		
CUPRESSACEAE **CYPRESS FAMILY**					
Hesperocyparis forbesii [=*Callitropsis forbesii*] Tecate cypress	–/–	1B.1	MSCP	Evergreen tree; closed-cone coniferous forest, chaparral; Otay Mountain; elevation 700–5,000 feet.	
			ANGIOSPERMS: MONOCOTS		
LILIACEAE **LILY FAMILY**					
Calochortus dunnii Dunn's mariposa lily	CR/–	1B.2	NE, MSCP	Perennial herb (bulbiferous); closed-cone coniferous forest, chaparral, gabbroic or metavolcanic, rocky substrate; blooms April–June; elevation 1,200–6,000 feet.	
ORCHIDACEAE **ORCHID FAMILY**					
Piperia cooperi chaparral rein-orchid	–/–	4.2	–	Perennial herb; chaparral, cismontane woodland, perennial grassland; blooms March to June; elevation less than 5,200 feet.	
POACEAE **GRASS FAMILY**					
Achnatherum diegoense San Diego County needlegrass	–/–	4.1	–	Perennial herb; rocky soils, chaparral, coastal sage scrub, often near streams; blooms Feb.–June; elevation less than 2,300 feet.	

ATTACHMENT 3
DULZURA PARCELS — SENSITIVE PLANT SPECIES OBSERVED
(Continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
THEMIDACEAE					
Muilla clevelandii San Diego goldenstar	–/–	1B.1	MSCP	Perennial herb (bulbiferous); chaparral, coastal sage scrub, valley and foothill grassland, vernal pools, clay soils; blooms May; elevation 170–1,500 feet.	
ANGIOSPERMS: DICOTS					
ASTERACEAE SUNFLOWER FAMILY					
Ambrosia [=*Hymenoclea*] *monogyra* Desert fragrance	–/–	2.2	–	Perennial shrub; chaparral, Sonoran Desert scrub; blooms Aug.-Nov; elevation 30 to 1,640 feet.	
Bahiopsis [=*Viguiera*] *laciniata* San Diego County viguiera	–/–	4.2	–	Shrub; chaparral, coastal sage scrub; blooms Feb.–June; elevation less than 2,500 feet.	
Isocoma menziesii var. *decumbens* [=var. *menziesii*] decumbent goldenbush	–/–	1B.2	–	Shrub; chaparral, coastal sage scrub, sandy soils, often in disturbed areas; blooms April–Nov.; elevation less than 500 feet.	
Iva hayesiana San Diego marsh-elder	–/–	2.2	–	Perennial herb; marshes and swamps, playas, riparian areas; blooms April–Sept.; elevation less than 1,700 feet.	
CACTACEAE CACTUS FAMILY					
Ferocactus viridescens San Diego barrel cactus	–/–	2.1	MSCP	Succulent; chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; blooms May–June; elevation less than 1,500 feet.	

ATTACHMENT 3
DULZURA PARCELS — SENSITIVE PLANT SPECIES OBSERVED
(Continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
CONVOLVULACEAE **MORNING-GLORY FAMILY**					
Dichondra occidentalis western dichondra	–/–	4.2	–	Perennial herb; chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland; blooms Mar.–July; elevation less than 1,650 feet.	
ERICACEAE **HEATH FAMILY**					
Arctostaphylos otayensis Otay manzanita	–/–	1B.2	MSCP	Evergreen shrub; chaparral and cismontane woodland on metavolcanic peaks, blooms Jan.–March; elevation 900–5,600 feet. San Miguel and Otay Mountains.	
FAGACEAE **OAK FAMILY**					
Quercus dumosa Nuttall's scrub oak	–/–	1B.1	–	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.	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.
Quercus engelmannii Engelmann oak	–/–	4.2	–	Tree; cismontane and riparian woodland, valley and foothill grasslands, chaparral; blooms March–May; elevation 400–4,300 feet.	
LAMIACEAE **MINT FAMILY**					
Lepechinia ganderi Gander's pitcher sage	–/–	1B.3	NE, MSCP	Perennial shrub, closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland; blooms June-July; elevation 1,000-3,300 feet.	

ATTACHMENT 3
DULZURA PARCELS — SENSITIVE PLANT SPECIES OBSERVED
(Continued)

Species	State/Federal Status	CNPS List	City of Chula Vista	Habitat/Blooming Period	Comments
MALVACEAE [STERCULIACEAE] **MALLOW FAMILY**					
Fremontodenron mexicanum Mexican flannelbush	CR/FE	1B.1	--	Evergreen shrub; closed-cone coniferous forest, chaparral, cismontane woodland, blooms March-June; elevation 30-2,350 feet.	
ONAGRACEAE **EVENING-PRIMROSE FAMILY**					
Clarkia delicata delicate clarkia	–/–	1B.2	–	Annual herb; cismontane woodland; blooms April–June; elevation 780–3,300 feet.	
PHRYMACEAE [=SCROPHULARIACEAE]					
Mimulus clevelandii Cleveland's bush monkeyflower	–/–	4.2	–	Perennial herb; disturbed areas and openings in chaparral and lower montane coniferous forest; blooms May–July; elevation 3,000–6,600 feet.	
ROSACEAE **ROSE FAMILY**					
Chamaebatia australis southern mountain misery	–/–	4.2	–	Evergreen shrub; chaparral; blooms Nov.–May; elevation 1,000–2,300 feet.	

FEDERAL CANDIDATES AND LISTED PLANTS
FE = Federally listed endangered
FT = Federally listed threatened
FC = Federal candidate for listing as endangered or threatened

STATE LISTED PLANTS
CE = State listed endangered
CR = State listed rare
CT = State listed threatened

ATTACHMENT 3
DULZURA PARCELS — SENSITIVE PLANT SPECIES OBSERVED
(Continued)

CALIFORNIA NATIVE PLANT SOCIETY Rare Plant Rankings

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

CITY OF CHULA VISTA

NE = Narrow endemic
MSCP = Multiple Species Conservation Program covered species

ATTACHMENT 4

ATTACHMENT 4
DULZURA PARCELS-SENSITIVE WILDLIFE SPECIES OBSERVED

Species	Status	Habitat
INVERTEBRATES (Nomenclature from Eriksen and Belk 1999; Mattoni 1990; and Opler and Wright 1999)		
NYMPHALIDAE BRUSH-FOOTED BUTTERFLIES		
Quino checkerspot *Euphydryas editha quino*	FE	Open, dry areas in foothills, mesas, lake margins. Larval host plant *Plantago erecta.* Adult emergence mid-January through April.
REPTILES (Nomenclature from Crother 2001 and Crother et al. 2003)		
IGUANIDAE IGUANID LIZARDS		
Coast horned lizard *Phrynosoma blainvillii* [=*coronatum*]	CSC, MSCP, *	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants for forage.
COLUBRIDAE COLUBRID SNAKES		
Two-striped gartersnake *Thamnophis hammondii*	CSC, *	Permanent freshwater streams with rocky bottoms. Mesic areas.
CROTALIDAE RATTLESNAKES		
Red diamond rattlesnake *Crotalus ruber*	CSC	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.
BIRDS (Nomenclature from American Ornithologists' Union 1998 and Unitt 1984)		
ACCIPITRIDAE HAWKS, KITES, & EAGLES		
Cooper's hawk (nesting) *Accipiter cooperii*	CSC, MSCP	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas. Migrant and winter visitor.
ALAUDIDAE LARKS		
California horned lark *Eremophila alpestris actia*	WL	Sandy shores, mesas, disturbed areas, grasslands, agricultural lands, sparse creosote bush scrub.
TURDIDAE THRUSHES		
Western bluebird *Sialia mexicana occidentalis*	MSCP	Open woodlands, farmlands, orchards.

ATTACHMENT 4
DULZURA PARCELS-SENSITIVE WILDLIFE SPECIES OBSERVED
(continued)

Species	Status	Habitat
EMBERIZIDAE EMBERIZIDS		
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	CSC, MSCP	Coastal sage scrub, chaparral, grassland. Resident.
Grasshopper sparrow (nesting) *Ammodramus savannarum perpallidus*	CSC	Tall grass areas. Localized summer resident, rare in winter.
MAMMALS (Nomenclature from Jones et al. 1997 and Hall 1981)		
CERVIDAE DEER		
Southern mule deer *Odocoileus hemionus*	MSCP	Many habitats.

STATUS CODES

Listed/Proposed
FE = Listed as endangered by the federal government

Other
CSC = California Department of Fish and Game species of special concern
WL = On "Taxa to Watch" list of California Department of Fish and Game bird 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)