Dudek and Associates, Inc., "Biological Resources Technical Report for the Entrada Site, Los Angeles County, California" (2006; 2006E)

Biological Resources Technical Report

Entrada

Los Angeles County, California

OCTOBER 2006

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BIOLOGICAL RESOURCES TECHNICAL REPORT
for the
ENTRADA SITE
Los Angeles County, California

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SUMMARY OF FINDINGS

Dudek conducted biological surveys of the 432-acre Entrada Site in August and September 2006 to assess existing conditions, map vegetation communities and land covers and determine the potential for special-status plants and wildlife to exist onsite. Vegetation community classifications used in this report primarily follow the *Vegetation Classification and Mapping Program, List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* (CDFG 2003) with a few exceptions. In certain instances, the vegetation communities observed in the field did not match the vegetation communities described by CDFG (2003). In these instances, Dudek developed additional vegetation community classifications.

Dudek conducted botanical surveys for special-status plant species annually from 2002 through 2005. Botanical surveys of the site were conducted between April and August of each year. More than 1,060 field-hours (106 field-days) were spent conducting botanical surveys within the study area over the four years that Dudek conducted surveys. Surveys were conducted in teams of two or more biologists, with at least one senior-level botanist included with each team. Biologists were able to observe reference populations of the state-listed endangered San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*; SFVS) and other special-status plant species in order to ensure flowering status and develop a search-image prior to conducting surveys of the Entrada site. Surveys focused on the identification and location of SFVS. Additional special-status plant species observed during SFVS surveys, including California Native Plant Society (CNPS) List 1B and 4 species, were also recorded.

Dudek conducted wildlife surveys in September 2006. All wildlife species detected on site were recorded. All vegetation communities and land covers on site were surveyed for potential to support special-status wildlife species. Guthrie (2000 and 2004) and Compliance Biology (2004) also conducted wildlife surveys.

1.0 INTRODUCTION

The purpose of the Biological Resources Technical Report is to describe the existing vegetation communities and land covers and survey results for special-status plant and animal species on the Entrada site located in northwestern Los Angeles County recognized by local, state, or federal resource agencies and/or environmental organizations recognize. Dudek conducted biological surveys of the Entrada Site in August and September 2006 to assess existing conditions, map vegetation communities and land covers and determine the potential for special-status plants and wildlife to exist onsite.

2.0 SITE DESCRIPTION

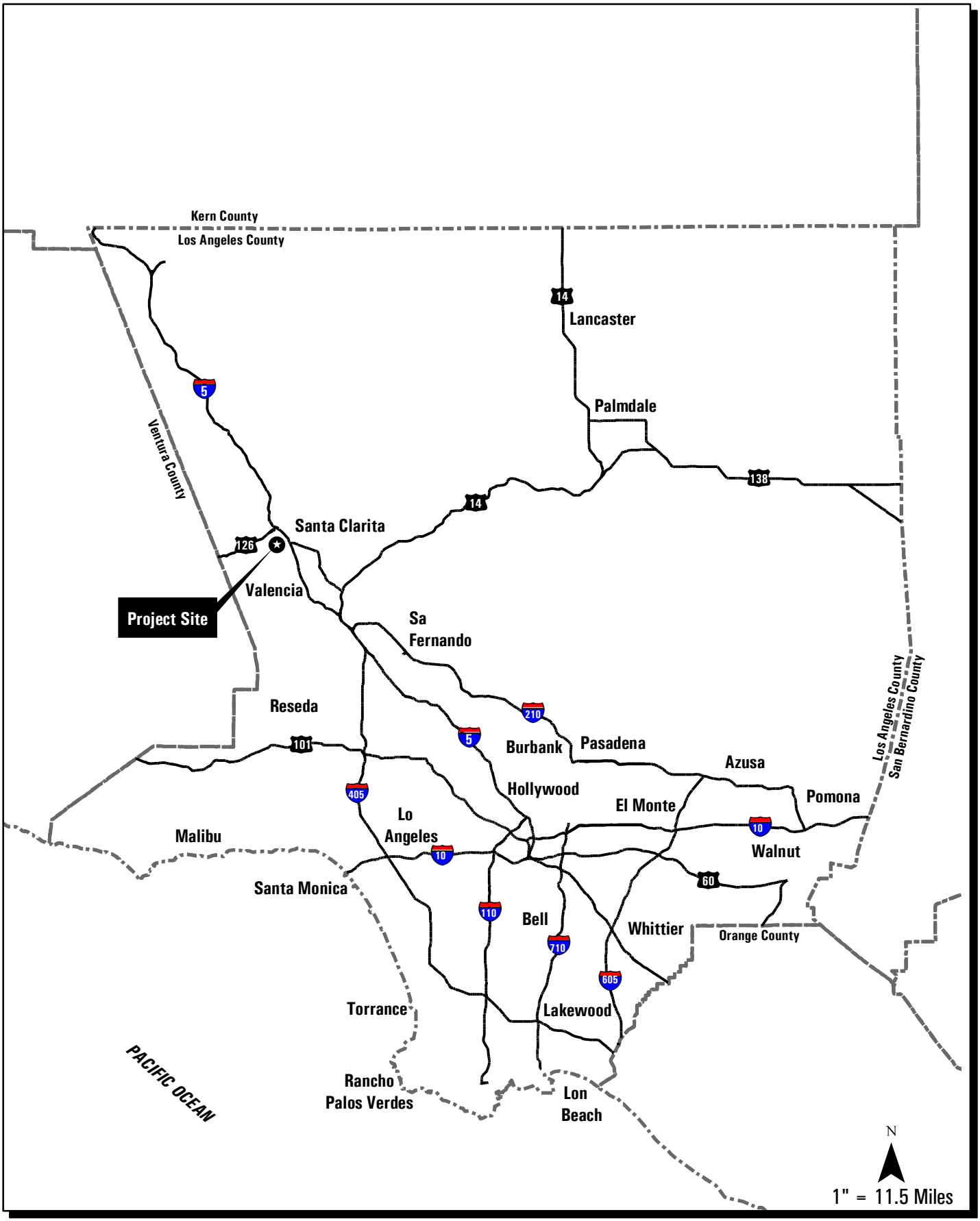
The 438-acre Entrada site is located in an unincorporated portion of the Santa Clara River Valley in northwestern Los Angeles County (*Figure 1*). The Entrada site lies just west of Interstate 5 (I-5) and south of the Santa Clara River. The City of Santa Clarita is immediately east of the project site on the east side of I-5 (*Figure 2*).

Newhall Land (Newhall) leases out portions of the site for oil and natural gas production, as well as for cattle grazing and agricultural operations. Southern California Edison and Southern California Gas Company have transmission lines within easements along the southern portion of the site as well. The easements/transmission lines are actively maintained.

2.1 Topography

The southern portion of the Entrada site is dominated by several north/south trending ridges. A narrow panhandle (roughly 100 meters wide) extends along the western portion of the site to an agricultural field adjacent to the Santa Clara River. Site elevations range from approximately 1,000 feet above mean sea level (AMSL) along the Santa Clara River to approximately 1,438 feet AMSL on the ridges in the southwestern portion of the site (*Figure 2*).

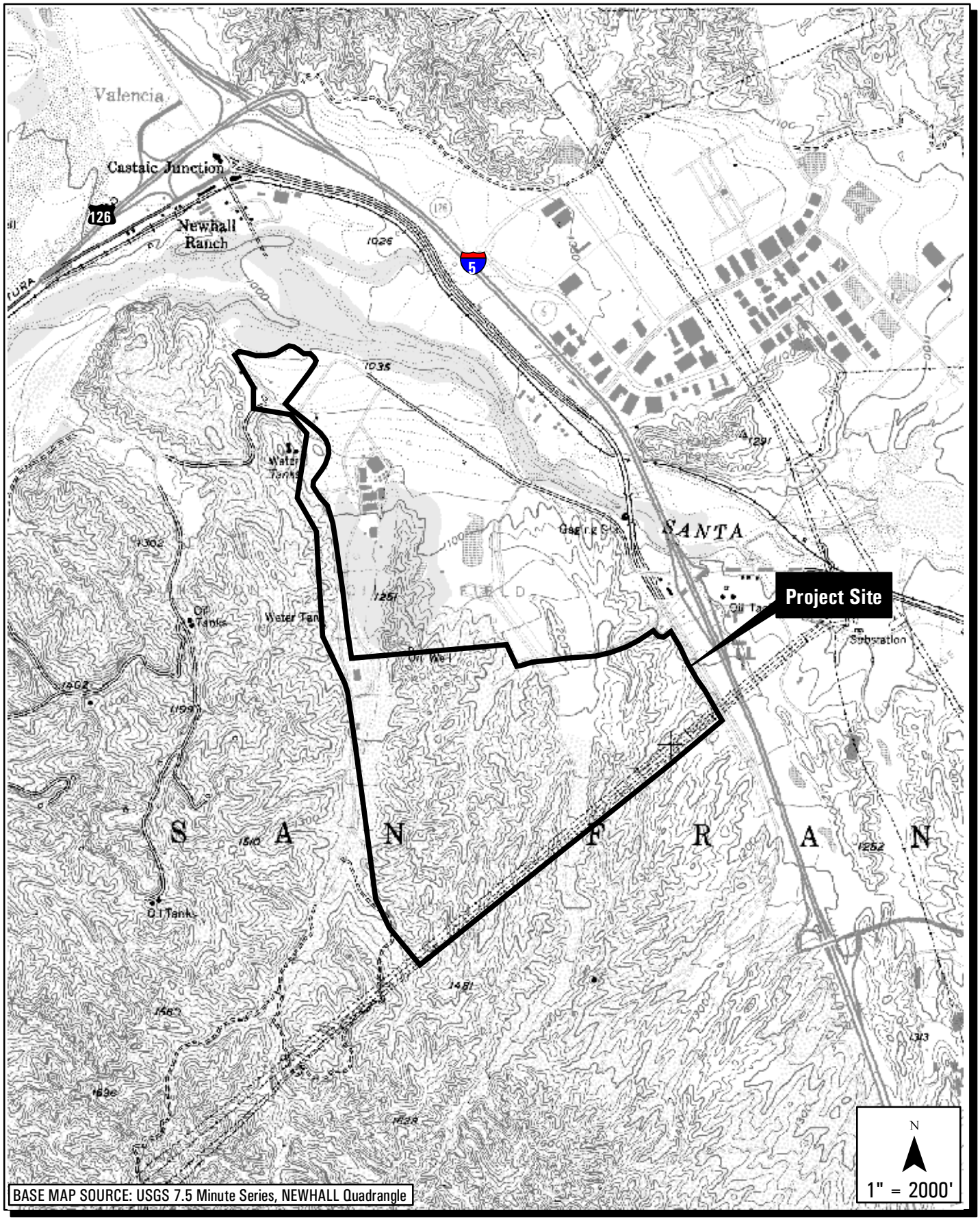
Slope gradients range from moderate to very steep in the hillside areas to very gentle adjacent to the Santa Clara River, tributary canyons and associated mesas. Distinctive geographic features include the north/south trending ridges on the southern portion of the site; a wash that drains north through the site to a concrete-lined drainage channel that passes through the Six Flags Amusement Park; and the Santa Clara River on the northwestern portion of the site.



Entrada Biological Resources Report

Regional Map

FIGURE 1



Entrada Biological Resources Report

Vicinity Map

FIGURE 2

2.2 Geology and Soils

Geologically, the site is located within the Transverse Range geomorphic province of southern California in the eastern portion of the Ventura depositional basin. This basin "was produced by tectonic downwarping in the geologic past to produce a large-scale synclinal structure in which a thick sequence of Cenozoic sediments has accumulated. These sediments have been lithified into a sequence of sedimentary rock that has subsequently been uplifted, tilted, and tectonically deformed (Allan E. Seward 2002, 2004)." They are cut by segments of the Del Valle and Castaic Creek faults. Bedrock formations found in the area include the Modelo, Towsley, Pico, Saugus, and Pacoima formations, as well as Quaternary Terrace deposits. Surficial deposits include Quaternary alluvium, slopewash, soil, and artificial fill (Allan E. Seward 2002, 2004).

Soils onsite include: Castaic-Balcom silty clay loams (30 to 50 percent); Cortina sandy loam (0 to 2 percent slopes); Hanford sandy loam (2 to 9 percent slopes); Metz loam (2 to 5 percent slopes); Mocho loam (0 to 2 percent slopes); Mocho loam (2 to 9 percent slopes); Saugus loam (30 to 50 percent slopes); Sorrento loam (2 to 5 percent slopes); Yolo loam (0 to 2 percent slopes); and Yolo loam (2 to 9 percent slopes) (USDA 1969).

3.0 METHODS AND SURVEY LIMITATIONS

Data regarding biological resources present on the Entrada site were obtained through a review of pertinent literature and through field reconnaissance; both are described in detail below.

3.1 Literature Review

Dudek has conducted special-status plant surveys annually on the Entrada site since 2002. The literature search used for general floristic and special-status botanical resources present or potentially present on the Entrada site is described in the *2006 Sensitive Plant Survey Results for the Entrada Site, Los Angeles County, California* (Dudek 2006). General information regarding wildlife species present in the region was obtained from Stebbins (2003) for reptiles and amphibians, American Ornithologists' Union (2005) for birds, Jones et al. (1997) for mammals, and Emmel and Emmel (1973) for butterflies. *Bird Surveys in the Proposed Magic Mountain Entertainment Project Area, Near Valencia, California* (Guthrie 2000) and *Bird Observations in the Proposed Magic Mountain Entertainment Project Area, Near Valencia, California* (Guthrie 2004) were consulted for sensitive bird species survey results. *Results of Butterfly Surveys on Magic Mountain Entertainment Site, Los Angeles, County, California* (Compliance Biology 2004) was reviewed for information on sensitive butterfly survey results. General information regarding vegetation communities were obtained from the California Department of Fish and

Game (CDFG) (2003), Holland (1986) and Sawyer and Keeler-Wolf (1995). Plant species nomenclature follows Hickman (1993).

3.2 Field Reconnaissance Methods

3.2.1 Resource Mapping

Vegetation communities and land covers were mapped in the field directly onto a 200-scale (1" = 200') false-color digital orthographic map (AirPhotoUSA 2005) of the Entrada site. These boundaries and locations were digitized by Dudek Geographic Information Systems (GIS) technician Mark McGinnis using ArcGIS software. Vegetation community classifications used in this report follow CDFG (2003).

Vegetation community classifications used in this report primarily follow the *Vegetation Classification and Mapping Program, List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* (CDFG 2003) with a few exceptions. In certain instances, the vegetation communities observed in the field did not match the vegetation communities described by CDFG (2003). In these instances, Dudek developed additional vegetation community classifications, which are described as "modified" in the vegetation descriptions in *Section 4.1* below.

3.2.2 Flora

All plant species encountered during the special-status plant field surveys were identified and recorded. Species that could not be identified immediately were brought into the laboratory for further investigation. Latin and common names of plants follow *The Jepson Manual* (Hickman 1993) or other recent published taxonomic treatments. Where not listed in Hickman (1993), common names were taken from Abrams (1923). Where not found in this reference, a variety of sources were used (e.g., Dale 1986; Roberts 1998).

3.2.3 Fauna

Dudek wildlife surveys were conducted by walking a meandering transect throughout the Entrada site, surveying all portions of the site (all canyons, ridgelines and vegetation communities), to ensure that sufficient visual coverage was obtained. Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded. Binoculars (7 x 50 power) were used to aid in the identification of observed wildlife. At regular intervals the biologist stopped, and listened for wildlife vocalizations. All wildlife species detected on site

were recorded. All vegetation communities and land covers on site were surveyed for potential to support special-status wildlife species. Also see Guthrie (2000 and 2004) and Compliance Biology (2004) for a description of survey methods.

Latin and common names of animals follow Stebbins (2003) for reptiles and amphibians, American Ornithologists' Union (2005) for birds, Jones et al. (1997) for mammals, and Emmel and Emmel (1973) for butterflies. Note: CDFG (2006) terminology is used when different from these sources for special-status species.

3.2.4 Special-status/Regulated Biological Resources

Special-status biological resources are those defined as follows: **(1)** species that have been given special recognition by federal, state, or local resource agencies and environmental organizations due to limited, declining, or threatened population sizes; **(2)** species and habitat types recognized by local and regional resource agencies as special-status; **(3)** habitat areas or vegetation communities that are unique, are of relatively limited distribution, or are of particular value to wildlife; and **(4)** wildlife corridors and habitat linkages. Regulated biological resources may or may not be considered special-status, but are regulated under local, state, and/or federal laws.

Dudek conducted botanical surveys for special-status plant species annually from 2002 through 2005. Botanical surveys of the site were conducted between April and August of each year. More than 1,060 field-hours (106 field-days) were spent conducting botanical surveys within the study area over the four years that Dudek conducted surveys. Surveys were conducted in teams of two or more biologists, with at least one senior-level botanist included with each team. Biologists were able to observe reference populations of the state-listed endangered San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*; SFVS) and other special-status plant species in order to ensure flowering status and develop a search-image prior to conducting surveys of the Entrada site. Surveys focused on the identification and location of SFVS. Additional special-status plant species observed during SFVS surveys, including California Native Plant Society (CNPS) List 1B and 4 species, were also recorded.

A complete description of field surveys procedures for special-status plants are described in *Sensitive Plant Survey Results for the Entrada Site, Los Angeles County, California* (Dudek 2002, 2004a, 2004b and 2006). *Table 1* lists the dates, conditions, and survey focus for each of the surveys.

TABLE 1
Dudek Survey Schedule and Personnel
Entrada Site

Date	Biologists	Purpose
2002-2005	Dudek	Special-status plant surveys
August 1, 2006	Sherri Miller, Phil Behrends	Vegetation mapping
September 1, 2006	Paul Lemons	General wildlife survey

3.2.5 Survey Limitations

Surveys for special-status plants were conducted in the spring and summer months. The timing of the surveys was coincident with the blooming period for SFVS and other spring to summer blooming annual species. This maximized the potential for detection of SFVS and other special-status plants during the survey effort.

Wildlife surveys were conducted in early September 2006 by Dudek; limitations of the survey include a seasonal (outside breeding season) and diurnal bias and the absence of trapping for small mammals, reptiles, and amphibians. The survey was conducted during the daytime to maximize the detection of most animals. Birds typically represent the largest component of the vertebrate fauna, and because most birds are active in the daytime, diurnal surveys maximize the number of observations of this portion of the fauna. In contrast, daytime surveys usually result in few observations of mammals, many of which may only be active at night. In addition, many species of reptiles and amphibians are secretive in their habits and are difficult to observe using standard meandering transects. Additional wildlife surveys included avian surveys conducted in Spring and early Summer 2000 and 2004 by Guthrie. These surveys include observations of breeding birds, and would be expected to include migrant or winter resident bird species. Also, butterfly surveys were conducted in April and May 2004 (Compliance Biology 2004), the optimal season to detect butterflies.

The surveys were conducted during daylight hours under weather conditions that did not preclude observation of special-status plant species (*e.g.*, surveys were not conducted during heavy fog or rain).

4.0 RESULTS OF SURVEYS

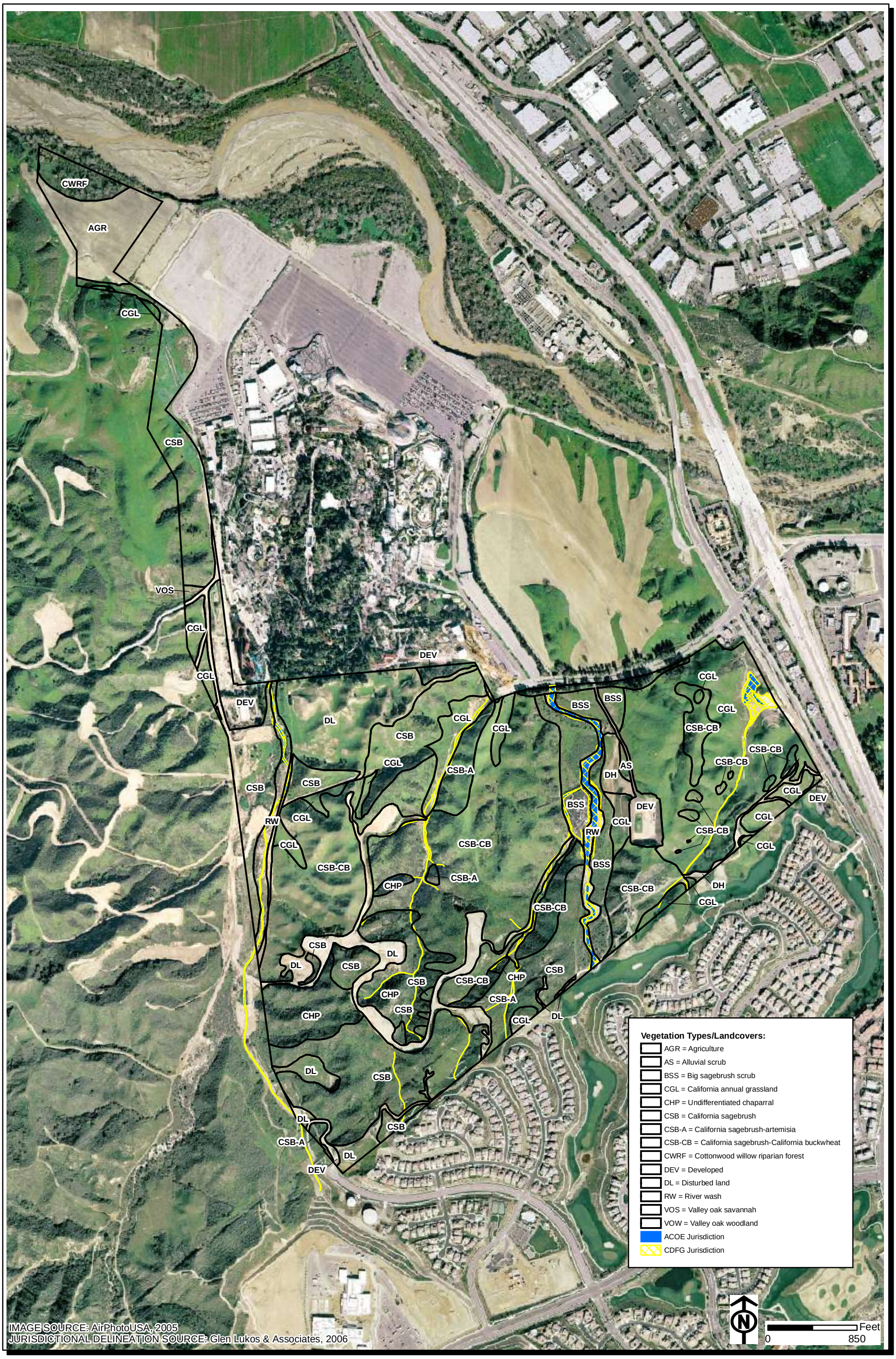
4.1 Botany – Vegetation Communities and Floral Diversity

Native and naturalized vegetation communities on the Entrada site are representative of those found in this region and of those plant communities found in the Santa Susana Mountains and the Santa Clara River ecosystems. As shown in *Table 2*, and illustrated in *Figure 3*, California sagebrush scrub is the dominant vegetation community on the Entrada site, much of it dominated by California buckwheat. California annual grassland, chaparral, and big sagebrush scrub are also common vegetation communities on the Entrada site. The northeast portion of the site includes an agricultural field with some intact upland vegetation communities.

While upland vegetation communities dominate the landscape of the Entrada site, the Santa Clara River is immediately adjacent to the site and supports a variety of riparian and open wash scrub plant communities. These include Southern cottonwood-willow riparian forest, alluvial scrub, and river wash.. These vegetation communities and land covers are described below. Included (where applicable) are the codes corresponding to the List of California Terrestrial Natural Communities (CNDDB 2003).

TABLE 2
Onsite Vegetation Communities and Land Cover Types

Vegetation Community	Acres
California Annual Grassland	68.3
California Sagebrush Scrub	84.8
California Sagebrush - Artemisia	7.4
California Sagebrush Scrub - California Buckwheat	115.9
Chaparral (undifferentiated)	24.6
Alluvial Scrub	0.5
Big Sagebrush Scrub	19.4
River Wash	10.2
Southern Cottonwood - Willow Riparian Forest	5.3
Valley Oak Savannah	0.5
Valley Oak Woodland	0.02
Agriculture	13.1
Developed	15.8
Disturbed Land	65.8
TOTAL	431.62



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Vegetation Communities with Jurisdictinal Delineation

FIGURE 3

4.1.1 California Annual Grassland (42.040.00)

California annual grassland is characterized by a mixture of weedy, introduced annuals, primarily grasses. It may occur where disturbance by maintenance (mowing, scraping, discing, spraying, etc.), grazing, repetitive fire, agriculture, or other mechanical disruption have altered soils and removed native seed sources from areas formerly supporting native vegetation. Onsite annual grassland consists of various annual non-native grasses including wild oat (*Avena fatua*), slender oat (*Avena barbata*), and bromes (*Bromus diandrus, B. madritensis* ssp. *rubens, B. hordeaceus*). Other herbaceous species include black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), Russian thistle (*Salsola tragus*), and doveweed (*Eremocarpus setigerus*). Some of these grasslands include occasional California sagebrush scrub species as described below but the low cover of these species does not warrant mapping as scrub. California annual grasslands may support special-status plant and animal species and provide foraging habitat for raptors (birds of prey).

4.1.2 California Sagebrush Scrub (32.010.00)

California sagebrush scrub is a native plant community characterized by a variety of soft, low, aromatic, drought-deciduous shrubs, such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), California bush sunflower (*Encelia californica*), and sages (*Salvia* spp.), with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*). It typically develops on south-facing slopes and other xeric situations.

Onsite California sagebrush scrub is dominated by a mixture of California sagebrush, black sage (*Salvia mellifera*), purple sage (*Salvia leucophylla*), and California buckwheat. Other species present within this community include our lord's candle (*Yucca whipplei*), slender tarweed (*Hemizonia fasiculata*), deerweed (*Lotus scoparius*), black mustard, and tocalote, with scattered chaparral species including chamise (*Adenostoma fasciculatum*), sugar bush (*Rhus ovata*), toyon, and chaparral bushmallow (*Malacothamnus fasciculatus*). California sagebrush scrub occurs onsite on dryer slopes, generally south or west facing.

California sagebrush scrub subcommunities also were mapped onsite. Each one is dominated by a particular species that characterizes the community. In some cases, the dominant plant species could be the only species present. These subcommunities are listed below.

- California Sagebrush (dominated only by California sagebrush) (32.010.01)
- California Sagebrush Scrub-Artemisia
- California Sagebrush Scrub-California Buckwheat (modified)

4.1.3 Undifferentiated Chaparral Scrub (37.000.00)

Undifferentiated chaparral scrub is a drought- and fire-adapted community of broad-leafed shrubs, 1.5-3.0 m tall, typically forming dense impenetrable stands. It develops primarily on mesic north-facing slopes and in canyons. This association is typically a mixture of chamise, ceanothus (*Ceanothus* spp.), scrub oak (*Quercus berberidifolia*), laurel sumac, and black sage.

Dominant chaparral species onsite include a mixture of chamise, hoaryleaf ceanothus (*Ceanothus crassifolius*), spiny redberry (*Rhamnus crocea*), sugar bush, and toyon. Other species that occur in this community onsite include chaparral bushmallow, holly-leaf redberry (*Rhamnus ilicifolia*), holly-leaf cherry (*Prunus ilicifolia*), and California sagebrush scrub species as described above.

4.1.4 Alluvial Scrub

Alluvial scrub occurs in creeks and washes on alluvial material. Species usually found in this community include wetland species that can tolerate more xeric conditions and transitional sage scrub species. This community does not fit into a defined plant community classification and was defined onsite by the dominant plant species onsite as referenced in the Draft Landmark Village Biota Report, Los Angeles County, California (2005b).

Onsite this community occurs solely within Santa Clara River and its tributaries. Species found onsite within this community include big sagebrush (*Artemisia tridentata*), mulefat (*Baccharis salicifolia*), tree tobacco (*Nicotiana glauca*), scalebroom (*Lepidosparum squamatum*), big saltbush (*Atriplex lentiformis*), and California sagebrush (*Artemisia californica*).

4.1.5 Big Sagebrush Scrub (35.110.00)

Big sagebrush scrub is comprised mostly of soft-woody shrubs, 0.5-2 m tall, usually with bare ground underneath and between shrubs (Holland 1986). This community is typically dominated by big sagebrush and non-native grasses. California sage scrub and chaparral species also occur within this vegetation type. This community generally occurs in alluvial areas along washes.

4.1.6 River Wash

River wash is a land cover type that occurs within washes of the Santa Clara River or its tributaries that are unvegetated or sparsely vegetated with seedlings, sparse grasses, and forbs, and is subject to scouring by seasonal storm flows.

4.1.7 Southern Cottonwood Willow Riparian Forest (61.130.02)

Southern cottonwood willow riparian forest is a tall, open, broad-leafed winter deciduous riparian forest dominated by Fremont cottonwood (*Populus fremontii*) and several different species of willow (*Salix* spp.). It occurs in frequently overflowed lands along rivers and streams.

4.1.8 Valley Oak Woodland (71.040.00)

Valley oak woodland includes a predominance of valley oaks in sufficient numbers to constitute between 20 and 50 percent cover. An association of valley oak woodland exists onsite, valley oak savannah (71.040.05), which includes valley oaks sparsely populated (up to 40 percent canopy cover) in either native or non-native grasslands.

4.1.9 Agriculture

Agriculture refers to areas where irrigated row and field crops are being grown [i.e., intensive agriculture]. This area may support grass species such as barley (*Hordeum* spp.) and wild oat (*Avena* spp.). This land has little biological resource value because it provides very limited habitat value for most native species. However, this area may supply grain and water for native and migratory birds.

4.1.10 Disturbed Land

Disturbed land typically occurs in areas where soils have been recently or repeatedly disturbed by grading or compaction resulting in the growth of very few native perennials, and are usually dominated by bare ground or non-native dicotyledonous species including filaree (*Erodium* spp.), black mustard, thistles (e.g., *Cynara cardunculus*, *Carduus pynocephalus*, and *Centaurea melitensis*), doveweed, and others. Within the Entrada study area, disturbed land occurs on permeable surfaces without vegetation, as well as with weedy annual non-native vegetation including Russian thistle, tocalote, doveweed, black mustard, and bull thistle (*Cirsium vulgare*).

4.1.11 Developed Land

Developed land refers to areas supporting manmade structures including homes, yards, roadways, and other highly modified lands supporting structures associated with dwellings or other permanent structures. Within the Entrada study area, developed land refers to existing roads.

4.1.12 Floral Diversity

The Entrada site is situated at the nexus of the Transverse, Coast, and Sierra Nevada ranges; the Mojave Desert; and coastal plains (Hickman 1993). Ecotone areas such as this are often characterized by higher biological diversity than similar-sized areas within the core of a physiographic region (Boyd 1999), and as such, a high diversity of plant species is expected. A cumulative total of 356 plant species was identified within the Entrada site between 2002 and 2006. Of these, 269 species (75%) are native to the region and 87 species (25%) are non-native. The cumulative list of plant species identified on the Entrada site in 2002, 2003, 2004, 2005 and 2006 is provided as *Appendix B*.

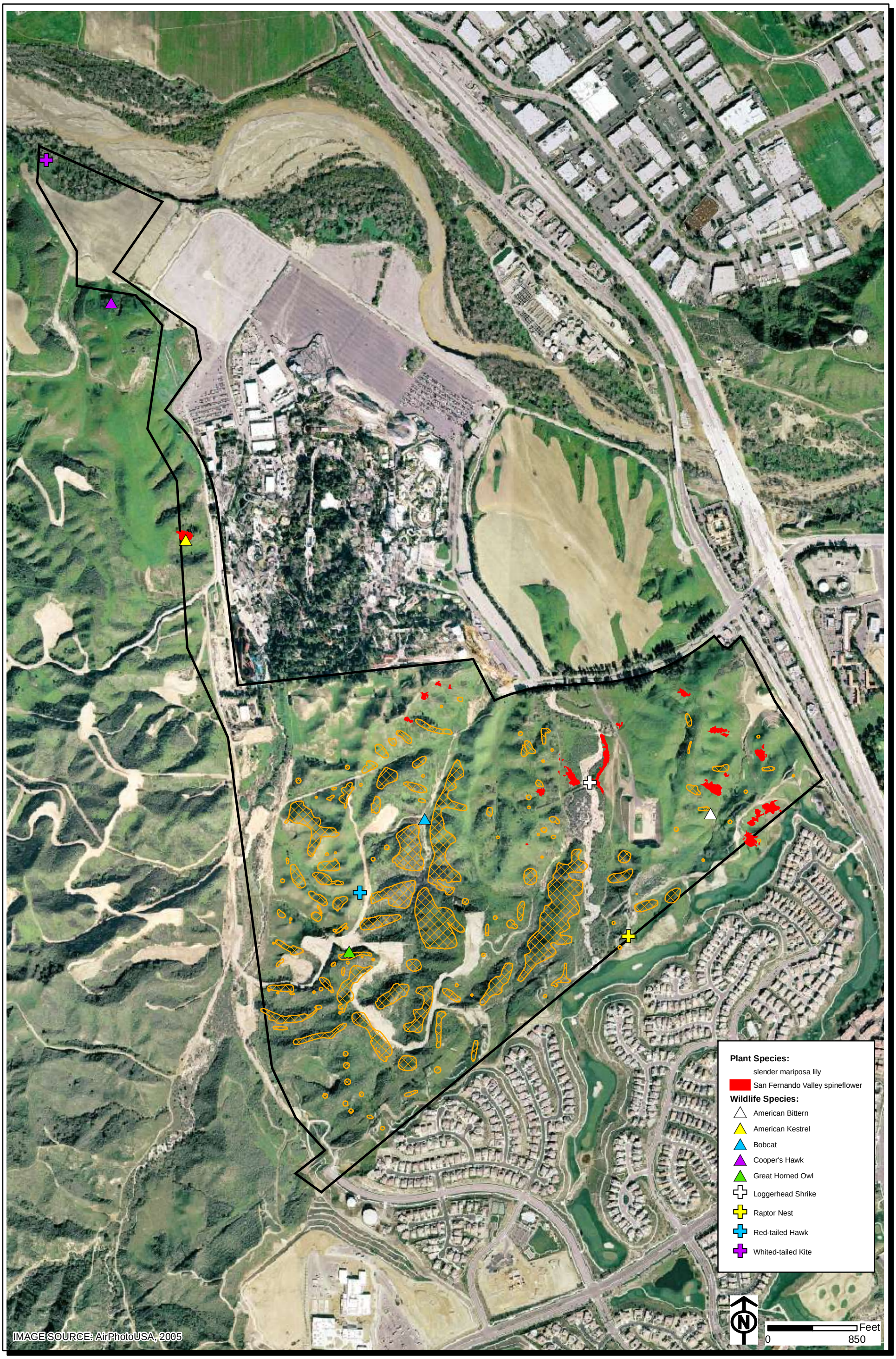
4.2 Zoology – Wildlife Diversity

4.2.1 General Wildlife

The Entrada site supports habitat for a diverse number of upland and wetland species. The wide range of vegetation communities found on site provide a diversity of suitable habitats for wildlife species. The Santa Clara River and onsite tributaries support a variety of riparian and scrub plant communities, including herbaceous wetlands, mulefat scrub, river wash, southern cottonwood-willow riparian forest, alluvial scrub and big sagebrush scrub. With the exception of agriculture and developed habitats, which are regularly maintained, these habitats are suitable for supporting a variety of wildlife species. A total of 108 species of wildlife were observed during the surveys by Dudek, Guthrie and Compliance Biology (*Appendix B*). *Figure 4* depicts the locations of special-status wildlife species observed onsite.

4.2.2 Birds

A cumulative total of 73 birds species was observed during the Dudek September 2006 survey and the Guthrie 2004 survey. Species observed on the site include turkey vulture (*Cathartes aura*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), white-tailed kite (*Elanus leucurus*), American kestrel (*Falco sparverius*), California quail (*Callipepla*



Entrada Biological Resources Report

Special Status Species

FIGURE 4

californica), killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), white-throated swift (*Aeronautes saxatalis*), Anna's hummingbird (*Calypte anna*), northern flicker (*Colaptes auratus*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), western kingbird (*Tyrannus verticalis*), and cliff swallow (*Petrochelidon pyrrhonota*). For the cumulative list of birds observed on the Entrada site, see *Appendix B.*

4.2.3 Reptiles and Amphibians

One reptile species was observed on the site: western fence lizard (*Sceloporus occidentalis*). Other reptile and amphibian species that may occur on Entrada include side-blotched lizard (*Uta stansburiana*), California whipsnake (*Masticophis lateralis*), gopher snake (*Pituophis melanoleucus*), western rattlesnake (*Crotalus viridis*), western toad (*Bufo boreas*), and treefrogs (*Hyla* spp.).

4.2.4 Mammals

Seven species of mammals were recorded on the site: cottontail (*Sylvilagus* spp.), California ground squirrel (*Spermophilus beecheyi*), woodrat (*Neotoma* sp.), coyote (*Canis latrans*), long-tailed weasel (*Mustela frenata*), bobcat (*Lynx rufus*), and mule deer (*Odocoileus hemionus*). Other mammals likely to occur include opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), and various rodents (*Peromyscus* spp., *Reithrodontomys megalotis*).

4.2.5 Butterflies and Moths

Twenty-seven species of butterflies or moths were recorded on the site, among them: common white (*Pontia protodice*), California dogface (*Colias Eurydice*), California white (*Pontia sisymbrii*), monarch (*Danaus plexippus*), buckeye (*Junonia coenia*), west coast lady (*Vanessa annabella*), and painted lady (*Vanessa cardui*).

4.3 Special-Status Biological Resources

The following resources are discussed in this section: **(1)** plant and animal species present in the project vicinity that are given special recognition by federal, state, or local resource agencies and environmental organizations owing to declining, limited, or threatened populations, that are the result, in most cases, of habitat reduction; and **(2)** habitat areas that are unique, are of relatively limited distribution, or are of particular value to wildlife.

Sources used for determination of sensitive biological resources are as follows:

- Wildlife: USFWS 2002 and CDFG California Natural Diversity Database (CNDDB) (CDFG 2005a and b);
- Plants: CDFG CNDDB (CDFG 2005c and d) and CNPS (2001) (including any revisions provided on http://www.cnps.org/inventory, accessed November 2005 and March 2006); and habitats, Holland (1986).

4.3.1 Special-Status Plant Species

Special-status plant species observed within the Entrada study area during the course of the annual 2002 through 2006 surveys include: SFVS, slender mariposa lily (*Calochortus clavatus* var. *gracilis*), Coulter's goldfields *(Lasthenia glabrata* ssp. *coulteri*), Peirson's morning glory *(Calystegia peirsonii*), southern California black walnut (*Cercocarpus betuloides* var. *blancheae*) and island mountain-mahogany *(Cercocarpus betuloides* var. *blancheae*). The Coulter's goldfields may have been introduced as part of a hydroseed mix for erosion control, as discussed below. Parish's big sagebrush (*Artemisia tridentata* ssp. *parishii*), a Los Angeles County special-status species, was also observed on site. These and other special-status species that have the potential to occur on the Entrada site, based on the presence of suitable habitat and soils, are listed in *Table 3.* This list is confined primarily to those species listed by the state and federal government as threatened or endangered, those species proposed for state and/or federal listing or candidates, those plant species found on Lists 1A, 1B, or 2 of the CNPS *Inventory of Rare Endangered Plants of California* (CNPS 2001) or CNPS online inventory (http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi).

Those species that were observed during the four years of field surveys are discussed in greater detail in the annual reports for sensitive plant species (Dudek 2002, 2004a, 2004b and 2006). *Figure 4* depicts the locations of special-status plant species observed onsite.

San Fernando Valley Spineflower (Chorizanthe parryi var. fernandina)
San Fernando Valley spineflower is state-listed as endangered, a candidate for federal listing, and a CNPS List 1B species. Until its rediscovery in 1999 at Laskey Mesa on Ahmanson Ranch in Ventura County, it was thought to be extinct. A review of information of historic occurrence of SFVS in the California Natural Diversity Database (CNDDB) indicate that it was previously thought to occur in sandy to gravelly soils of washes, riverbeds, and upland areas primarily on the margins of the San Fernando Valley at the base of the Santa Susana Mountains, San Gabriel Mountains, and the Simi Hills. Munz (1974) provides distribution information to include Orange and San Diego counties.

TABLE 3
Special-status Plant Species Observed and Potentially Occurring at the Entrada Site

Scientific Name	Common Name	Status Federal/ State	CNPS List	Primary Habitat Associations/Life Form/Blooming Period	Likelihood of Occurrence Onsite
Arenaria paludicola	marsh sandwort	FE/SE	1B	dense freshwater marsh/perennial herb/May-August	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads; nearest occurrences are in the Santa Ana River and in Santa Barbara. Limited suitable habitat onsite; very low likelihood of occurrence within the study area.
Artemisia tridentata ssp. *parishii*	Parish's big sagebrush	None/None	None	Big sagebrush scrub on the margins of drainage channels/perennial shrub/November-August	Co-occurs with *Artemisia tridentata* ssp. *tridentata*. Observed within big sagebrush scrub within NRSP. Moderate potential to occur within Entrada. Parish's big sagebrush is considered sensitive by the County of Los Angeles.
Astragalus brauntonii	Braunton's milk-vetch	FE/None	1B	chaparral, coastal sage scrub, grasslands; often on carbonate substrates/perennial herb/March-July	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads; nearest occurrence is in the Simi Hills. Suitable habitat exists onsite. Moderate likelihood of occurrence within study area.
Atriplex coulteri	Coulter's saltbush	None/None	1B	coastal sage scrub and grasslands on alkaline or clay substrate/perennial herb/March-October	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite. Moderate likelihood of occurrence within study area.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None/None	1B	coastal bluff scrub and coastal sage scrub on alkaline substrate/annual herb/May-October	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite. Low likelihood of occurrence within the study area.
Baccharis malibuensis	Malibu baccharis	None/None	1B	chaparral, coastal sage scrub, cismontane woodland/deciduous shrub/August	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads; closest known populations are in the western Santa Monica Mountains near Malibu. Not expected to occur within the study area.
Berberis nevinii	Nevin's barberry	FE/SE	1B	chaparral, coastal sage scrub, riparian scrub, cismontane woodland on sandy or gravelly substrate/evergreen shrub/March-April	Not observed during the 2002 through 2005 field seasons. CNDDB records exist for San Francisquito Canyon at confluence with Santa Clara River; suitable habitat present onsite. Moderate likelihood of occurrence within study area.
Brodiaea filifolia	thread-leaved brodiaea	FT/SE	1B	clay substrate openings in chaparral, sage scrub, and grasslands/perennial herb (geophyte)/March-June	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads; nearest occurrence is in San Dimas. Suitable habitat present onsite. Low likelihood of occurrence within study area.
Calachortus catalinae	Catalina mariposa lily	None/None	4	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/ perennial herb (geophyte)/ February-May	Not observed during 2003-2005 field seasons. In 2002, a *Calochortus* species with a wide seed capsule and a mebranaceous bulb coat was observed onsite that was *likely C. catalinae*. A search of this area in 2003-2005 only revealed *C. venustus* and *C. clavatus* var. *gracilis*. Low to moderate likelihood of occurrence in study area.

TABLE 3
Special-status Plant Species Observed and Potentially Occurring at the Entrada Site

Scientific Name	Common Name	Status Federal/ State	CNPS List	Primary Habitat Associations/Life Form/Blooming Period	Likelihood of Occurrence Onsite
Calochortus clavatus var. *gracilis*	slender mariposa lily	None/None	1B	chaparral and coastal sage scrub/perennial herb (geophyte)/March-May	Observed 118 polygons predominantly on steep, north-facing slopes in California sagebrush throughout the study area. Overall onsite population estimate is 3,907 individuals within occurrence polygons covering 17.6 acres of the site. CNDDB records for mouth of Pico Canyon.
Calochortus plummerae	Plummer's mariposa lily	None/None	1B	chaparral, coastal sage scrub, cismontane woodland, grasslands on rocky granitic substrate/perennial herb (geophyte)/May-July	Not observed during 2003-2005 field season. A *Calochortus* species with narrow seed capsules and a fibrous bulb coat was observed onsite in 2002, but could not be confirmed as *C. plummerae*. A search of this area in 2005 only revealed *C. venustus*. Moderate likelihood of occurrence within study area.
Calochortus weedii var. *vestus*	late-flowered mariposa lily	None/None	1B	chaparral, cismontane & riparian woodland/perennial herb (geophyte)/ June-August	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads; however, habitat similar to where species occurs in eastern Ventura County is present onsite. Moderate likelihood of occurrence within study area.
Calystegia peirsonii	Peirson's morning-glory	None/None	4	chaparral, coastal sage scrub, cismontane woodland, grassland/ perennial herb/May-June	Observed in chaparral and California sagebrush throughout the study area.
Calystegia sepium ssp. *binghamiae*	Santa Barbara morning-glory	None/None	1A	marshes and swamps/perennial herb/ April-May	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads. Limited suitable habitat present onsite. Low likelihood of occurrence within study area.
Centromadia [=Hemizonia] parryi ssp. *Australis*	southern tarplant	None/None	1B	mesic edges of marshes in grasslands/annual herb/May-November	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite. Low likelihood of occurrence within study area.
Cercocarpus betuloides var. *blancheae*	island mountain-mahogany	None/None	4	chaparral, closed-cone coniferous forest/evergreen shrub/February-May	Observed in mixed chaparral in the study area.
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	FC/SE	1B	Coastal sage scrub, sandy soils/annual herb/April-June	Observed 29 polygons in the southeastern, central, and western portions of the site. Total onsite population estimate is 750,480 individuals within occurrence polygons covering 1.3 acres of the site.
Deinandra [=Hemizonia] minthornii	Santa Susana tarplant	None/SR	1B	chaparral and coastal sage scrub on rocky substrate/deciduous shrub/July-November	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads; however, records exist for the Simi Hills and Oat Mountain. Suitable habitat exists onsite. Low likelihood of occurrence within study area.
Delphinium parryi ssp. *blochmaniae*	dune larkspur	None/None	1B	maritime chaparral, coastal dunes/ perennial herb/ April-may	Not observed during the 2002 through 2005 field seasons. Not expected to occur due to lack of suitable habitat.

TABLE 3
Special-status Plant Species Observed and Potentially Occurring at the Entrada Site

Scientific Name	Common Name	Status Federal/ State	CNPS List	Primary Habitat Associations/Life Form/Blooming Period	Likelihood of Occurrence Onsite
Dodecahema leptoceras	slender-horned spineflower	FE/SE	1B	alluvial scrub on sandy substrate/ annual herb/April-June	Not observed during the 2002 through 2005 field seasons. Historic CNDDB records exist for the Newhall or Val Verde quads in alluvial habitat similar to that present onsite. Moderate to high likelihood of occurrence onsite.
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's Dudleya	None/None	1B	clay openings in chaparral and coastal sage scrub, grasslands/perennial herb/April-June	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads. Suitable habitat present onsite. Low to moderate likelihood of occurrence within study area.
Dudleya cymosa ssp. *marcescens*	marcescent dudleya	FT/CR	1B	chaparral, often on volcanic substrate/perennial herb (geophyte)/ April-June	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for Newhall and Val Verde quads. Low likelihood of occurrence within study area.
Dudleya cymosa ssp. *ovatifolia*	Santa Monica Mountains dudleya	FT/None	1B	chaparral and coastal sage scrub, often on volcanic substrate/perennial herb (geophyte)/March-June	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for Newhall and Val Verde quads. Suitable habitat present onsite. Low likelihood of occurrence within study area.
Dudleya multicaulis	many-stemmed dudleya	None/None	1B	coastal bluff scrub, coastal sage scrub, valley and foothill grassland, rocky, often clay substrate/perennial herb/ April-June	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads; closest known occurrences are in Calabasas and San Dimas. Suitable habitat exists onsite. Low to moderate likelihood of occurrence within study area.
Dudleya parva	Conejo Dudleya	FT/None	1B	coastal sage scrub and grassland on rocky, gravelly clays/perennial herb/May-June	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads. Suitable habitat exists onsite. Low to moderate likelihood of occurrence within study area.
Erodium macrophyllum	round-leaved filaree	None/None	2	cismontane woodland and grasslands on clay substrate/annual herb/March-May	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads; however, records exist for Simi Valley, and this plant was observed in the hills east of Castaic Lake in 2003. Suitable habitat present onsite; moderate likelihood of occurrence in study area.
Helianthus nuttallii ssp. *parishii*	Los Angeles sunflower	None/None	1A	marshes and swamps/perennial herb/ August-October	Not observed within study area during 5-years of surveys. A *Helianthus* population, discovered in 2002 at Castaic Spring, on the south side of the Santa Clara River between Middle Canyon and San Jose Flats, was determined by some experts to be this subspecies, but determined by other experts not to be this subspecies. Based on pollen electron microscopy and chromosome counts, it is likely that the Newhall *Helianthus* species is a hybrid between *H. nuttallii* and *H. californicus* or an intermediate evolutionary step between the two species (Porter

TABLE 3
Special-status Plant Species Observed and Potentially Occurring at the Entrada Site

Scientific Name	Common Name	Status Federal/ State	CNPS List	Primary Habitat Associations/Life Form/Blooming Period	Likelihood of Occurrence Onsite
					and Fraga 2004). No suitable habitat observed in study area.
Horkelia cuneata var. *puberula*	mesa horkelia	None/None	1B	chaparral, cismontane woodland, coastal sage scrub on sandy or gravelly substrate/perennial herb/February-December	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads. Suitable habitat present onsite. Low likelihood of occurrence within study area.
Juglans californica	southern California black walnut	None/None	4	chaparral, cismontane woodland, coastal sage scrub, alluvial scrub/ deciduous tree/March-May	Occasionally observed within mixed chaparral, California sagebrush and alluvial scrub onsite.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None	1B	Marshes, swamps, plays, vernal pools/ annual herb/ February-June	Observed as a component of an erosion control seed mix applied along dirt roads associated with the gas and power transmission line easement running the southeastern edge of the study area. These plants are growing in conditions outside the natural habitat for this species.
Malacothamnus davidsonii	Davidson's bush mallow	None/None	1B	chaparral, coastal sage scrub, riparian woodland/ deciduous scrub/June-January	Not observed during the 2002 through 2005 field seasons. Nearest occurrences are in Van Nuys and Sunland quads. Suitable habitat present onsite. Moderate likelihood of occurrence within study area.
Nama stenocarpum	mud nama	None/None	2	edges of lakes, rivers, ponds, vernal pools/annual/January-July	Not observed during the 2002 through 2005 field seasons. Moderate likelihood of occurrence on banks of Santa Clara River and other mesic areas onsite. No CNDDB records exist for the Newhall or Val Verde quads. Limited suitable habitat present onsite. Low likelihood of occurrence within study area.
Nolina cismontana	chaparral nolina	None/None	1B	chaparral, coastal sage scrub on sandstone or gabbro substrate/ perennial shrub/April-July	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads. Limited suitable habitat present onsite. Low likelihood of occurrence within study area.
Opuntia basilaris var. *brachyclada*	short-joint beavertail	None/None	1B	chaparral, Joshua tree woodland, Mojavean desert scrub/succulent shrub/ April-June	This variety was identified onsite by Dudek in 2002; however, further investigations indicate that these plants are not consistent with *Opuntia basilaris var. brachyclada*. Therefore, *O. basilaris* plants were not mapped during surveys of the study area in 2003-2005.
Pentachaeta lyonii	Lyon's pentachaeta	FE/SE	1B	openings in chaparral and coastal sage scrub, grasslands/annual herb/March-August	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads; nearest occurrences are in the Simi Valley. Suitable habitat present onsite. Moderate likelihood of occurrence within study area.

TABLE 3
Special-status Plant Species Observed and Potentially Occurring at the Entrada Site

Scientific Name	Common Name	Status Federal/ State	CNPS List	Primary Habitat Associations/Life Form/Blooming Period	Likelihood of Occurrence Onsite
Rorippa gambelii	Gambel's watercress	FE/ST	1B	Marsh and swamps (freshwater and brackish)/ perennial herb/April-September	Not observed during the 2002 through 2005 field seasons. No CNDDB records exist for the Newhall or Val Verde quads. Limited suitable habitat present onsite. Very low likelihood of occurrence within study area.
Senecio aphanactis	rayless ragwort	None/None	2	chaparral, coastal sage scrub, cismontane woodland on alkaline substrate/annual herb/January-April	Not observed during the 2002 through 2005 field seasons. Historic CNDDB record for Saugus, south of Santa Clara River. Suitable habitat exists onsite. Moderate likelihood of occurrence within study area.
Sidalcea neomexicana	Salt Spring checkerbloom	None/None	2	chaparral, coastal sage scrub, and playas on alkaline substrate/perennial herb/March-June	Not observed during 5-years of surveys, however, entire site not surveyed. No CNDDB records exist for the Newhall or Val Verde quads; suitable habitat exists onsite. Moderate likelihood of occurrence within study area.
Thelypteris puberula var. *sonorensis*	Sonoran maiden fern	None/None	2	meadows and seeps/perennial herb/ fertile January-September	Not observed during 5-years of surveys, however, entire site not surveyed. No CNDDB records exist for the Newhall or Val Verde quads; nearest occurrence at Point Dume. Limited suitable habitat present onsite. Low likelihood of occurrence within study area.

Legend

FE:	Federally-listed as endangered	CNPS List 1A:	Plants presumed extinct in California
FT:	Federally-listed as threatened	CNPS List 1B:	Plants rare, threatened, or endangered in California and elsewhere
FC:	Federal candidate for listing	CNPS List 2:	Plants rare, threatened, or endangered in California but more common elsewhere
SC:	State candidate for listing	CNPS List 3:	Plants about which we need more information – a review list
SE:	State-listed as endangered	CNPS List 4:	Plants of limited distribution – a watch list
ST:	State-listed as threatened		
SR:	State-listed as rare		

SFVS polygons were identified in several areas onsite including the southeastern portion of the site, the central area in and beside the wash, and the western portion of the site adjacent to the Magic Mountain Theme Park on the south side and west side. Almost 70 percent of the SFVS individuals were found on south-facing slopes in habitat ecotonal between California sagebrush and California annual grasslands, and between California buckwheat and California annual grasslands. Elevations of the SFVS polygons on this site range from approximately 1,150 to 1,205 feet AMSL. Vegetative cover in the area of SFVS occurrences ranges from 50 to 100 percent, but individuals are most common in areas with between 90 and 95 percent vegetative cover. About 40 percent of individuals were found on silty loam, 34 percent were found on clay loam, and about 16 percent were found on sandy loam soils.

SFVS was first detected at Entrada in 2000. Three polygons representing a total of 1000 to 2000 individuals were mapped (pers. com. FLx, March 23, 2004). Surveys conducted in May, June and September 2002, identified only about 20 individuals in the 2002 cohort. However, SFVS plants that germinated sometime prior to 2002 were still visible and totaled approximately 1,399,550 individuals. Based on visual estimates, surveys conducted in 2003 identified approximately 1,183,500 individuals, 45,730 individuals were observed in 2004, and 750,490 individuals were observed in 2005 (*Table 4*).

TABLE 4
SFVS Populations on Entrada Site (2002-2005)

Year	Estimated Population
2002	20
2003	1,183,504
2004	45,733
2005	56,565

Slender Mariposa Lily (Calochortus clavatus var. gracilis)

Slender mariposa lily has no state or federal status but is a CNPS List 1B plant. It is typically found in chaparral, California sagebrush scrub, and California annual grasslands, often on clay, and/or rocky soils. It has been documented to occur at the mouth of Pico Canyon and other canyons in the vicinity (Newhall Quad; CDFG 2004b). Other varieties of this species are documented from southern California: club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*) and pale mariposa lily (*C. clavatus* var. *pallidus*). The club-haired mariposa lily differs in that it is virtually a serpentine endemic (restricted to serpentine soils) and a very robust species, generally attaining a height of one meter. Pale mariposa lily differs in that the petals are a paler yellow, the anthers are paler (yellow to pale purple), and the hairs on the petals are not as knobby or club shaped. Neither the club-haired mariposa lily nor pale mariposa are known to have a red line above the nectary on the petal, as does the slender mariposa lily.

Multiple slender mariposa lily polygons were mapped within the Entrada study area by drawing boundaries on aerial photograph field maps around the areas that contained the mariposa lily. The *Calochortus* plants were scattered within these polygons, and estimates of the number of flowering individuals (not total number of individuals) were made based on visual estimates. Geophytes such as *Calochortus* generally only have a small portion of the plants flower in any given year, and the non-flowering individuals are not as visible.

Within the Entrada study area, the slender mariposa lily was found primarily on south-facing slopes (70 percent of all individuals identified), and to a lesser extent on southeast-facing slopes

(20 percent of all individuals identified) in California grasslands, and California sagebrush and California buckwheat scrub. The plants were generally mapped in areas of high vegetative cover and on a variety of soil types (*e.g.*, silty loam, sandy loam, clay loam). This species is locally abundant within the study area.

In 2002, a *Calochortus* species was observed onsite but current-year flowers were not available to identify it to species. In 2003, 7,870 slender mariposa lilies were observed onsite. In 2004, 419 slender mariposa lilies were observed onsite. In 2005, 3,907 slender mariposa lilies were observed onsite (*Table 5*).

TABLE 5
Slender Mariposa Lily Populations on Entrada Site (2002-2005)

Year	Estimated Population
2002	Not known
2003	7,870
2004	419
2005	3,907

Island Mountain-mahogany (Cercocarpus betuloides var. blancheae)
Island mountain-mahogany has no state or federal status, but it is a CNPS List 4.3 species. It is an evergreen shrub that occurs as part of the chaparral communities in Los Angeles and Ventura counties, as well as on several of the Channel Islands (CNPS 2001). This species was not observed during limited focused surveys for special-status plant species conducted in 1992 (Dames and Moore 1993) or general botanical surveys conducted in 1995 (RECON and Impact Sciences 1996). Onsite, island mountain-mahogany occurs occasionally in chaparral at the base of north-facing slopes in the Entrada site. This species was not mapped due to its CNPS list 4.3 sensitivity level.

Peirson's morning glory (Calystegia peirsonii)
Peirson's morning-glory has no state or federal status, but it is a CNPS List 4.2 species. This morning-glory is a rhizomatous perennial that typically is found in more desert-like areas (*e.g.*, creosote bush scrub, Joshua tree woodland) at elevations which typically exceed 3,000 feet AMSL, although there are records in the CNDDB for lower elevations in the local area. While not abundant, Peirson's morning-glory is widespread onsite and was observed on virtually all ridges and slopes, climbing over mixed chaparral, California sagebrush, California buckwheat, and in California annual grasslands throughout the 432-acre Entrada study area. Due to the

widespread nature of Peirson's morning-glory on the Entrada site and CNPS List 4.2 sensitivity level, it was not mapped.

Coulter's Goldfields (Lasthenia glabrata ssp. coulteri)

Coulter's goldfields is a CNPS List 1B.1 species that previously had not been documented to occur in the immediate vicinity of the Entrada site (Hickman 1993; CNPS 2001). This subspecies is generally restricted to alkali playas, vernal pools, and some freshwater habitats in Riverside, San Diego, and Los Angeles counties (CNPS 2001). The Coulter's goldfields plants on the Entrada site may result from the application of an erosion control hydroseed mix along the gas and power transmission line easements. The plants are growing in areas that are not typical habitat for this species: on cut banks and in the graded road rather than alkali playas or other areas with standing water. These plants appear to be a non-native introduction to the site.

Southern California Black Walnut (Juglans californica)

Southern California black walnut has no state or federal status, but is a CNPS List 4.2 species. Within its distributional range in southern California, this species is found as scattered occurrences throughout chaparral, cismontane woodlands, and coastal and alluvial scrub habitats (CNPS 2001). This large shrub to tree was incidentally observed as an occasional component of mixed chaparral, California sagebrush and alluvial scrub onsite.

Parish's Big Sagebrush (Artemisia tridentata ssp. parishii)

Parish's big sagebrush is considered sensitive by the County of Los Angeles. This subspecies co-occurs with the more common *Artemisia tridentata* ssp. *tridentata*. According to *The Jepson Manual* (Hickman, et. al., 1993), the differentiating characteristics between the two subspecies are as follows: inflorescence branches drooping and fruit hairy in subspecies *parishii*, and inflorescence branches erect to spreading and fruit glandular in subspecies *tridentata*.

Artemisia tridentata plants were evaluated within the Landmark Village portion of the Newhall Ranch Specific Plan Area in November 2005. There are big sagebrush plants with drooping inflorescence branches and erect inflorescence branches that co-occur there, so collections of both were made. After analyzing the characteristics of numerous samples, including examining the fruits under a microscope, it was determined that both subspecies probably occur there. However, it appears as though these two subspecies may hybridize, as the full range of characteristics (drooping and erect inflorescence branches and hairy and glandular fruit) were found among the collected specimens.

The characteristics were generally consistent among individual plants that seemed to fit discreetly into either subspecies *parishii* or subspecies *tridentata* (i.e., a plant with drooping

inflorescence branches and hairy fruit had drooping inflorescence branches and hairy fruit throughout the plant). However, plants that appeared to be hybrids sometimes had mixed characters throughout.

Although specimens on Entrada were not collected for detailed evaluation, there is a moderate potential that *Artemisia tridentata* ssp. *parishii* occurs within big sagebrush scrub in the study area.

Bryophytes (Non-vascular Plants) and Lichens

Bryophytes (non-vascular plants including mosses, liverworts, and hornworts) include plants which lack specialized water- or nutrient-conducting tissue. Lacking water-transporting tissue, bryophytes must live in proximity to a moisture source and are commonly found in damp or shady microhabitats. Overall, the Entrada site is fairly arid and supports little of this type of habitat; however, limited areas of mosses were found on north-facing slopes, in chaparral, and along shady banks and cut faces of ephemeral stream channels.

Lichens, in contrast, are not classified as plants but are instead unique mutualistic associations of fungi with green algae and/or cyanobacteria. Lichens are extremely widespread in nature; they are found at nearly every latitude and altitude on earth. Lichens often grow on exposed rocks but are also found on bare soil, tree trunks, or in one instance, completely submerged in water (Raven *et al*. 1992). Generally, the Entrada site contains little habitat appropriate for the growth of lichens as rocky substrates are limited.

No special-status non-vascular plants or lichens were observed onsite or are known to occur in the proximity of the Entrada site.

4.3.2 Special-status Wildlife Species

A cumulative total of 13 special-status wildlife species was identified during Guthrie's 2000 and 2004 surveys, Compliance Biology's (2004) survey, and Dudek's September 2006 survey. These include Cooper's hawk (*Accipiter cooperii*), a California Species of Special Concern; Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), a California Species of Special Concern; American bittern (*Botaurus lentiginosus*), a Fish and Wildlife Service Region 1 Species of Management Concern; yellow warbler (*Dendroica petechia brewsteri*), a California Species of Special Concern; white-tailed kite (*Elanus leucurus*), a state Fully Protected Species and a Fish and Wildlife Service Migratory Nongame Bird of Management Concern; loggerhead shrike (*Lanius ludovicianus*), a California Species of Special Concern; and monarch butterfly (*Danaus plexippus*), a Special Animal. The other species

include red-shouldered hawk (*Buteo lineatus*), turkey vulture (*Cathartes aura*), blue-gray gnatcatcher (*Polioptila caeurulea*), western bluebird (*Siala mexicana*), tree swallow (*Tachycineta bicolor*) and muledeer (*Odocoileus hemionus*), which are considered to be sensitive by the County of Los Angeles.

Observed and other special-status species that have the potential to occur within the Entrada study area, based on the presence of suitable habitat and geographic range, are listed in *Table 6*. This list is confined primarily to species listed by the state and federal government as threatened or endangered, species proposed for state and/or federal listing or candidates, wildlife species generally considered to be rare or declining, and species considered sensitive the County of Los Angeles.

TABLE 6
Special-status Wildlife Species Observed or Potentially Occurring in Entrada Project Area

Scientific Name	Common Name	Status Federal/State[1] /Other	Primary Habitat Associations	Status Onsite Or Potential To Occur
		INVERTEBRATES		
Branchinecta lynchi	Vernal pool fairy shrimp	FT/ None	Vernal pools; cool-water pools with low to moderate dissolved solids	Low potential to occur based on habitats present, suitable pools not located
Danaus plexippus (wintering sites)	Monarch butterfly	None/ None	Overwinters in eucalyptus groves	Species observed on site during Compliance Biology surveys in 2004.
Plebulina emigdionis	San Emigdio blue butterfly	None/None	Often near streambeds, washes, or alkaline areas. Associated with four-wing saltbrush (*Atriplex canescens)* and quail bush (*Atriplex lentiformis*).	A colony was observed in Potrero Canyon in NRSP in association with *Atriplex lentiformis* plants (Compliance Biology 2004). Suitable habitat occurs within Salt Creek area, VCC and Entrada.
		FISH		
Catostomus santaanae	Santa Ana sucker	FT/ CSC	Small, shallow, cool, clear streams less than 7 meters in width and a few centimeters to more than a meter in depth; substrates are generally coarse gravel, rubble and boulder	Low potential to occur based on habitats present, habitat may occur in tributaries to Santa Clara River. Populations in the Santa Clara River were introduced (Swift et al 1993)
Gasterosteus aculeatus williamsoni	Unarmored threespine stickleback	FE/CE, CFP	Slow-moving and backwater areas.	This species is known to occur in the Santa Clara River and has been observed in the portion of the river within NRSP (ENTRIX 2005).
Gila orcuttii	Arroyo chub	None/ CSC	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths > 40 centimeters; substrates of sand or mud	Low potential to occur based on habitats present, habitat may occur in tributaries to Santa Clara River.

TABLE 6
Special-status Wildlife Species Observed or Potentially Occurring in Entrada Project Area

Scientific Name	Common Name	Status Federal/State[1] /Other	Primary Habitat Associations	Status Onsite Or Potential To Occur
		AMPHIBIANS		
Bufo californicus	Arroyo toad	FE/CSC	Stream channels for breeding(typically 3rd order); adjacent stream terraces and uplands for foraging and wintering	Moderate potential to occur along riparian areas onsite (i.e. tributaries to Santa Ana River)
Ensatina klauberi	Large-blotched salamander	None/CSC	Oak woodland, chaparral, coastal sage scrub, coastal dunes, conifer forest	Moderate potential to occur based on habitat present
Rana aurora draytoni	California red-legged frog	FT/CSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Very low potential to occur based on habitats present
Rana mucosa	Mountain yellow-legged frog	FE, FC/CSC	Meadow streams, isolated pools, lake borders, rocky stream courses within ponderosa pine, montane hardwood-conifer and montane riparian habitat types	Very low potential to occur based on habitat present
Spea [=*Scaphiopus*] *hammondi*	Western spadefoot	None/CSC	Most common in grasslands, coastal sage scrub near rain pools or vernal pools; riparian habitats	High potential to occur based on habitat present
		REPTILES		
Anniella pulchra pulchra	Silvery legless lizard	None/CSC	Loose soils (sand, loam, humus) in coastal dune, coastal sage scrub, woodlands, and riparian habitats	High potential to occur based on habitat present
Aspidoscelis tigris stejnegeri	Coastal western whiptail	None/None	Coastal sage scrub, chaparral	High potential to occur based on habitat present
Charina [=*Lichanura*] *trivirgata* ssp. *roseofusca*	Coastal rosy boa	None/ None	Rocky chaparral, coastal sage scrub, oak woodlands, desert and semi-desert scrub	High potential to occur based on habitat present
Diadophis punctatus modestus	San Bernardino ringneck snake	None/None	Open, rocky and somewhat moist areas near intermittent streams: grasslands, sage scrub	Moderate potential to occur based on habitat present
Emys [=*Clemmys*] *marmorata pallida*	Southwestern pond turtle	None/ CSC	Slow-moving permanent or intermittent streams, ponds, small lakes, reservoirs with emergent basking sites; adjacent uplands used during winter	Low potential to occur based on habitat present
Phrynosoma coronatum (blainvillei population)	Coast (San Diego) horned lizard	None/ CSC	Coastal sage scrub, annual grassland, chaparral, oak and riparian woodland, coniferous forest	High potential to occur based on habitat present
Salvadora hexalepis virgultea	Coast patch-nosed snake	None/CSC	Chaparral, washes, sandy flats, rocky areas	Moderate potential to occur based on habitat present
Thamnophis hammondii	Two-striped garter snake	None/ CSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Moderate potential to occur along riparian areas onsite (i.e. tributaries to Santa Ana River)
Thamnophis sirtalis ssp.	South Coast garter snake	None/ CSC	Marshes, meadows, sloughs, ponds, slow-moving water courses	Low potential to occur based on habitats present

TABLE 6
Special-status Wildlife Species Observed or Potentially Occurring in Entrada Project Area

Scientific Name	Common Name	Status Federal/State[1] /Other	Primary Habitat Associations	Status Onsite Or Potential To Occur
		BIRDS		
Accipiter cooperii (nesting)	Cooper's hawk	None/ CSC	Riparian and oak woodlands, montane canyons	Species observed on site during September 2006 survey period
Accipiter striatus (nesting)	Sharp-shinned hawk	None/ CSC	Nests in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine; winters in lowland woodlands and other habitats	High potential to occur during winter months
Agelaius tricolor (nesting colony)	Tricolored blackbird	BCC, USBC/ CSC/ Aud	Nests near fresh water, emergent wetland with cattails or tules; forages in grasslands, woodland, agriculture	High potential to occur based on habitats present and sightings along Castaic Creek north of Entrada site; no breeding habitat present onsite
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/ CSC	Grass-covered hillsides, coastal sage scrub, chaparral with boulders and outcrops	Observed by Guthrie in 2000 and 2004.
Ammodramus savannarum	Grasshopper sparrow	SMC/ None	Open grassland and prairie, especially native grassland with a mix of grasses and forbs	High potential to occur based on habitat present
Amphispiza belli belli	Bell's sage sparrow	BCC, SMC/ CSC	Coastal sage scrub and dry chaparral along coastal lowlands and inland valleys	High potential to occur based on habitat present
Aquila chrysaetos (nesting and wintering)	Golden eagle	BCC/ CSC, P	Open country, especially hilly and mountainous regions; grassland, coastal sage scrub, chaparral, oak savannas, open coniferous forest	High potential to forage onsite; breeding resources available adjacent to site
Ardea alba	Great egret (rookery)		Nests colonially in large trees. Rookery sites are typically located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Moderate potential to forage onsite; no rookery sites have been observed on the Project site during annual bird surveys.
Ardea herodias	Great blue heron	None/None	Variety of habitats, but primarily wetlands; lakes, rivers, marshes, mudflats, estuaries, saltmarsh, riparian habitats	High potential to occur based on habitat present, breeding resources available
Asio flammeus (nesting)	Short-eared owl	USBC/ CSC/ Aud	Grassland, prairies, dunes, meadows, irrigated lands, saline and freshwater emergent wetlands	Moderate potential to occur onsite during winter months,, especially foraging.
Asio otus (nesting)	Long-eared owl	None/ CSC	Riparian, live oak thickets, other dense stands of trees, edges of coniferous forest	Moderate potential to occur onsite, especially foraging. Species observed in Newhall Ranch High Country during fall 2005 surveys.
Athene cunicularia (burrow sites)	Burrowing owl	BCC/ CSC	Grassland, lowland scrub, agriculture, coastal dunes and other artificial open areas	Moderate potential. None observed during Gurthrie or Dudek surveys.
Botaurus lentiginosus	American bittern	USBC, SMC/ None	Emergent habitat of freshwater marsh and vegetation borders of ponds and lakes	Observed during September 2006 survey flying overhead towards pond on adjacent golf course.

TABLE 6
Special-status Wildlife Species Observed or Potentially Occurring in Entrada Project Area

Scientific Name	Common Name	Status Federal/State[1] /Other	Primary Habitat Associations	Status Onsite Or Potential To Occur
Buteo lineatus	Red-shouldered hawk	None/ None	Riparian and woodland habitats, eucalyptus	Species observed by Guthrie (2000 and 2004)
Buteo regalis (wintering)	Ferruginous hawk	BCC, SMC/ CSC Aud	Open, dry country, grasslands, open fields, agriculture	High potential to occur as winter forager based on habitat present
Buteo swainsoni (nesting)	Swainson's hawk	BCC, USBC/ ST/ Aud	Open grassland, shrublands, croplands	Low potential to occur based on habitats present
Campylorhynchus brunneicapillus sandiegensis	Coastal (San Diego) cactus wren	BCC/ CSC	Southern cactus scrub, maritime succulent scrub, cactus thickets in coastal sage scrub	Low potential to occur based on habitats present
Carduelis lawrencei	Lawrence's goldfinch	BCC/None	Valley foothill hardwood, valley foothill hardwood-conifer; and, in S. CA., desert riparian, palm oasis, pinyon-juniper and lower montane habitats.	Observed within the riparian habitats within NRSP during annual bird surveys; suitable nesting and foraging habitat is present within NRSP, Salt Creek area, VCC and Entrada.
Cathartes aura	Turkey vulture	None/ None	Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting and resting	Species observed on site during Guthrie's 2000 and 2004 surveys and during Dudek's September 2006 survey. Nesting opportunities are also present.
Catharus ustulatus	Swainson's thrush	None/ None	Riparian habitat with dense understory and dense shrubs	Moderate potential to occur based on habitats present
Circus cyaneus (nesting)	Northern harrier	None/ CSC	Open wetlands (nesting), pasture, old fields, dry uplands, grasslands, rangelands, coastal sage scrub	High potential to occur based on habitat present
Coccyzus americanus occidentalis (nesting)	Western yellow-billed cuckoo	FC, BCC, SMC/ SE	Dense, wide riparian woodlands and forest with well-developed understories	Very low potential to occur within southern cottonwood-willow riparian forest onsite
Dendroica petechia brewsteri (nesting)	Yellow warbler	None/ CSC	Nests in lowland and foothill riparian woodlands dominated by cottonwoods, alders and willows; winters in a variety of habitats	A single migrant was observed onsite by Guthrie 2000.
Elanus leucurus (nesting)	White-tailed kite	MNBMC/ P	Open grasslands, savanna-like habitats, agriculture, wetlands, oak woodlands, riparian	Guthrie observed a single individual regularly hunting over study area in 2004. Observed during Dudek's September 2006 survey. Likely nests along Santa Clara River.
Empidonax traillii extimus (nesting)	Southwestern willow flycatcher	FE, USBC/ SE/ Aud	Riparian woodlands along streams and rivers with mature, dense stands of willows or alders; may nest in thickets dominated by tamarisk	Moderate potential to occur within southern cottonwood-willow riparian forest onsite
Eremophila alpestris actia	California horned lark	None/ CSC	Open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, fallow grain fields	High potential to occur based on habitat present

TABLE 6
Special-status Wildlife Species Observed or Potentially Occurring in Entrada Project Area

Scientific Name	Common Name	Status Federal/State[1] /Other	Primary Habitat Associations	Status Onsite Or Potential To Occur
Falco columbarius (wintering)	Merlin	None/ CSC	Nests in open country, open coniferous forest, prairie; winters in open woodlands, grasslands, cultivated fields, marshes, estuaries and sea coasts	Moderate potential to occur based on habitat present
Falco mexicanus (nesting)	Prairie falcon	BCC/ CSC	Grassland, savannas, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Moderate potential to occur based on habitat present. Species observed in nearby Newhall Ranch High Country during fall 2005 surveys.
Falco peregrinus anatum	American peregrine falcon	BCC, (FD) / SE, P	Nests on cliffs, buildings, bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Moderate potential to occur based on habitat present
Haliaeetus leucocephalus (nesting & wintering)	Bald eagle	FT/ SE, P	Seacoasts, rivers, swamps, large lakes; winters at large bodies of water in lowlands and mountains	Very low potential to forage onsite based on habitats present; no potential for nesting onsite
Icteria virens (nesting)	Yellow-breasted chat	None/ CSC	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles and dense brush.	High potential to occur within riparian habitat onsite
Lanius ludovicianus (nesting)	Loggerhead shrike	BCC/ CSC	Open ground including grassland, coastal sage scrub, broken chaparral, agriculture, riparian, open woodland	Observed by Guthrie in 2000 and 2004. Species observed in nearby Newhall Ranch High Country during fall 2005 surveys.
Nycticorax nycticorax (rookery)	Black-crowned night heron	None/ None	Marshes, ponds, reservoirs, estuaries; nests in dense-foliaged trees and dense fresh or brackish emergent wetlands	Low potential to occur based on habitats present
Piranga rubra (nesting)	Summer tanager	None/CSC	Nests in riparian woodland; winter habitats include parks and residential areas	High potential to occur based on habitat present
Polioptila caeurulea	Blue-gray gnatcatcher	None/None	Chaparral, brushland	Observed by Guthrie (2000 and 2004)
Polioptila californica californica	Coastal California gnatcatcher	FT, USBC/ CSC/ Aud	Coastal sage scrub, coastal sage scrub-chaparral mix, coastal sage scrub-grassland ecotone, riparian in late summer	Low potential due to elevation and habitat disturbance
Progne subis (nesting)	Purple martin	None/ CSC	Nests in tall sycamores, pines, oak woodlands, coniferous forest; forages over riparian, forest and woodland	Low nesting potential onsite. Moderate potential to forage onsite based on habitats present.
Pyrocephalus rubinus flammeus	Vermillion flycatcher	None/ CSC	Breeding habitat includes riparian woodlands, riparian scrub, and freshwater marshes	Moderate potential to occur based on habitats present
Siala mexicana	Western bluebird	None/None	Open forests of deciduous, coniferous or mixed trees, savanna, edges of riparian woodland	Observed by Guthrie (2000 and 2004)

TABLE 6
Special-status Wildlife Species Observed or Potentially Occurring in Entrada Project Area

Scientific Name	Common Name	Status Federal/State[1] /Other	Primary Habitat Associations	Status Onsite Or Potential To Occur
Tachycineta bicolor	Tree swallow	None/ None	Nests in cavity-containing trees or snags near or in water; riparian forest and woodland, lodgepole pine belt; forages over water	Observed by Guthrie (2000 and 2004)
Vireo bellii pusillus (nesting)	Least Bell's vireo	FE, BCC, USBC/ SE/ Aud	Nests in southern willow scrub with dense cover within 1-2 meters of the ground; habitat includes willows, cottonwoods, baccharis, wild blackberry or mesquite on desert areas	High potential to occur based on habitats present and sightings in adjacent areas (i.e., along Castaic Creek, approximately one mile north of Entrada in 2006).
MAMMALS				
Antrozous pallidus	Pallid bat	CSC/ WBWG	Rocky outcrops, cliffs, and crevices with access to open habitats for foraging	Moderate potential to occur based on habitats present. Species observed in nearby Newhall Ranch High Country during ANABAT surveys (Impact Sciences 2005a).
Choeronycteris mexicana	Mexican long-tongued bat	None/ CSC/WBWG	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland. Roosts in caves, mines, and buildings.	Low potential to occur based on habitats present
Coryorhinus townsendii	Townsend's big-eared bat	CSC/ WBWG	Mesic habitats, gleans from brush or trees or feeds along habitat edges	Low potential to occur based on habitat present
Eumops perotis californicus	Western mastiff bat	CSC/ WBWG	Roosts in small colonies in cracks and small holes, seeming to prefer man-made structures	Moderate potential to occur based on habitats present
Euderma maculata	Spotted bat	None/ CSC	Occupies a wide variety of habitats from arid deserts and grasslands, to mixed conifer forests. Feeds over water and along washes. Needs rock crevices in cliffs or caves for roosting.	Moderate potential to occur based on habitat present
Lassiurus xanthinus	Western yellow bat	None/None	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland.	Low potential to occur based on habitats present
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/ CSC	Arid habitats with open ground; grasslands, coastal sage scrub, agriculture, disturbed areas, rangelands	High potential to occur based on habitat present
Myotis leibii(=ciliolabrum)	Small-footed myotis	None/None	Caves, old mines, abandoned buildings	Low potential to occur based on habitats present
Myotis thysanodes	Fringed myotis	None/ None/ WBWG	Open habitats, early successional stages, streams, lakes, and ponds are foraging areas	High potential to occur based on habitat present
Myotis volans	Long-legged myotis	None/ None/ WBWG	Feeds over open water and over open habitats, using denser woodlands and forests for cover and reproduction	Moderate potential to occur based on habitat present

TABLE 6
Special-status Wildlife Species Observed or Potentially Occurring in Entrada Project Area

Scientific Name	Common Name	Status Federal/State[1] /Other	Primary Habitat Associations	Status Onsite Or Potential To Occur
Myotis yumanensis	Yuma myotis	None/ None	Closely tied to open water which is used for foraging; open forests and woodlands are optimal habitat	Low potential to occur based on habitats present
Neotoma lepida intermedia	San Diego desert woodrat	None/ CSC	Coastal sage scrub, chaparral, pinyon-juniper woodland with rock outcrops, cactus thickets, dense undergrowth	A single woodrat midden was located – probably occurs at low densities
Nyctinomops femorosaccus	Pocketed free-tailed bat	None/ CSC	Rocky desert areas with high cliffs or rock outcrops	Low potential to occur based on habitat present
Nyctinomops macrotis	Big free-tailed bat	None/ CSC	Rugged, rocky canyons	Low potential to occur based on habitat present.
Odocoileus hemionus	Mule deer	None/ Regulated	Coastal sage scrub, chaparral, riparian, woodlands, forest; often browses in open areas adjacent to cover	Species observed on site during September 2006 survey.
Onychomys torridus ramona	Southern grasshopper mouse	None/ CSC	Grassland, sparse coastal sage scrub	Low potential to occur based on habitats present
Puma concolor	Mountain lion	None/Regulated	Coastal sage scrub, chaparral, riparian, woodlands, forest; rests in rocky areas, and on cliffs and ledges that provide cover	Moderate potential to occur. Numerous tracks observed in nearby Newhall Ranch High Country during fall 2005 surveys.
Taxidea taxus	American badger	None/ CSC	Dry, open treeless areas, grasslands, coastal sage scrub	Moderate potential to occur. Species burrow observed in nearby Newhall Ranch High Country during fall 2005 surveys.

[1]The federal and state status of species primarily is based on the Special Animals List (July 2005), California Department of Fish and Game.

Federal Designations:

- BCC Fish and Wildlife Service: Birds of Conservation Concern
- FC Candidate for federal listing as threatened or endangered
- (FD) Federally-delisted; monitored for five years
- FE Federally-listed Endangered
- FT Federally-listed as Threatened
- MNBMC Fish and Wildlife Service Migratory Nongame Birds of Management Concern
- PFT Proposed for listing as Federally Threatened
- USBC United States Bird Conservation Watch List
- SMC Fish and Wildlife Service Region 1 Species of Management Concern

State Designations:

- CSC California Special Concern Species
- P California Department of Fish and Game Protected and Fully Protected Species
- SE State-listed as Endangered
- ST State-listed as Threatened

Other:

- AFS E American Fisheries Society Endangered classification
- Aud Audubon Society Watch list
- WBWG Western Bat Working Group High Priority species

4.3.3 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping stones for dispersal.

Undeveloped land to the west of the Entrada site allows wildlife to move freely in the project vicinity. The site itself does not provide a corridor or linkage between offsite undeveloped lands. Connections to other areas of undisturbed lands near the study site are restricted by adjacent existing development, which includes the Old Road, Interstate 5 and the City of Santa Clarita immediately to the east, Magic Mountain amusement park immediately to the north, and residential neighborhoods to the south of the site. Thus the site is bordered on three sides by existing development.

An arm of the project boundary extends northward along the western boundary of Magic Mountain and into an area of southern cottonwood willow riparian forest associated with the Santa Clara River. The Santa Clara River serves as a regional wildlife corridor to undeveloped lands to the east and northwest of the region, but would not be directly affected by development of the Entrada site.

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APPENDIX A

Vascular Plant Species Observed Entrada Site (2002-2006)

APPENDIX A
VASCULAR PLANT SPECIES
ENTRADA SITE

FERNS

PTERIDACEAE – BRAKE FAMILY

Pellaea andromedifolia var. *andromedifolia* – coffee fern
Pentagramma triangularis – goldenback fern

CONIFERS

CUPRESSACEAE – CYPRESS FAMILY

Cupressus sp. – cypress
Juniperus californica – California juniper

PINACEAE – PINE FAMILY

* *Pinus halepensis* – Allepo pine
Pinus sp. – *pine*

ANGIOSPERMAE (DICOTYLEDONES)

AMARANTHACEAE – AMARANTH FAMILY

* *Amaranthus albus* – tumbleweed
* *Amaranthus retroflexus* – rough pigweed

ANACARDIACEAE – SUMAC FAMILY

Rhus ovata – sugar-bush
Rhus trilobata – squaw bush
* *Schinus molle* – Peruvian pepper-tree
* *Shinus terebinthifolius* – Brazilian pepper-tree
Toxicodendron diversilobum – poison-oak

APIACEAE – CARROT FAMILY

Apiastrum angustifolium – wild celery
Bowlesia incana – American bowlesia
Daucus pusillus – rattlesnake weed
Lomatium utriculatum – common lomatium

APPENDIX A (*Cont.*)

ASCLEPIADACEAE – MILKWEED FAMILY

Asclepias californica – California milkweed
Asclepias eriocarpa – Indian milkweed
Asclepias fascicularis – narrow-leaf milkweed

ASTERACEAE – SUNFLOWER FAMILY

Acourtia microcephala – sacapellote
Ambrosia acanthicarpa – annual burweed
Ambrosia confertifolia – weak-leaved burweed
Ambrosia psilostachya – western ragweed
* *Arctotheca calendula* – capeweed
Artemisia californica – coastal sagebrush
Artemisia douglasiana – California mugwort
Artemisia dracunculus – tarragon
Artemisia tridentata – Great Basin sagebrush
Baccharis pilularis – coyote brush
Baccharis salicifolia – mule fat
Baccharis sarothroides – chaparral broom
Brickellia californica – California brickellbush
Brickellia nevinii – Nevin's brickellbush
* *Carduus pycnocephalus* – Italian thistle
* *Centaurea melitensis* – star thistle
Chaenactis glabriuscula – yellow pincushion
* *Chamomilla suaveolens* – pineapple weed
Chrysothamnus sp. – rabbitbrush
Chrysothamnus nauseosus – rubber rabbitbrush
Cirsium occidentale var. *californicum* – California thistle
Cirsium occidentale var. *occidentale* – cobwebby thistle
* *Cirsium vulgare* – bull thistle
* *Cnicus benedictus* – blessed thistle
Conyza canadensis – common horseweed
Conyza coulteri – Coulter's horseweed
Coreopsis bigelovii – tickseed
* *Cotula australis* – cotula
* *Cotula coronopifolia* – African brass-buttons
Deinandra (*Hemizonia*) *fasciculata* – fascicled tarweed

APPENDIX A (*Cont.*)

* *Dimorphotheca sinuata* – African daisy
Encelia actoni – Acton's encelia
Encelia californica – California bush sunflower
Encelia farinosa – brittlebush, incensio
Ericameria palmeri var. *pachylepis* – Palmer's goldenbush
Ericameria linearifolia – narrowleaf goldenbush
Erigeron foliosus – leaf daisy
Eriophyllum confertiflorum – long-stem golden yarrow
Euthamia occidentalis – western goldenrod
Filago californica – California fluffweed
Gnaphalium californicum – California everlasting
Gnaphalium canescens ssp. *microcephalum* – white everlasting
* *Gnaphalium luteo-album* – white cudweed
Gnaphalium palustre – lowland cudweed
Hazardia squarrosa ssp. *grindelioides* – saw-toothed goldenbush
Helianthus annuus – common sunflower
Heterotheca grandiflora – telegraph weed
Heterotheca sessiliflora – golden aster
* *Hypochaeris glabrata* – smooth cats ear
Isocoma menziesii – goldenbush
* *Lactuca serriola* – prickly lettuce
Lasthenia californica – coast goldfields
Lasthenia glabrata ssp. *coulteri* – Coulters goldfields
Layia platyglossa – common tidy-tips
Lepidospartum squamatum – scale-broom
Lessingia filaginifolia – California aster
Lessingia filaginifolia var. *filaginifolia* – California aster
Lessingia glandulifera – valley vinegar-weed
Madia gracilis – slender tarweed
Malacothrix saxatilis var. *commutata* – cliff desertdandelion
Malacothrix saxatilis var. *tenuifolia* – cliff malacothrix
* *Matricaria matricarioides* – pineapple weed
Osmadenia tenella – southern rosinweed
* *Picris echioides* – bristly ox-tongue
Pluchea sericea – arrow weed
Rafinesquia californica – California chicory

APPENDIX A (*Cont.*)

Senecio californica – California groundsel
Senecio flaccidus var. *douglasii* – butterweed
* *Senecio vulgaris* – common groundsel
* *Silybum marianum* – milk thistle
* *Sonchus asper* – prickly sow-thistle
* *Sonchus oleraceus* – common sow-thistle
Stebbinsoseris heterocarpa – grassland stebbinsoseris
Stephanomeria virgata – twiggy wreathplant
Stylocline gnaphalioides – everlasting nest-straw
Tetradymia comosa – cotton thorn
Uropappus lindleyi – silver puffs
Xanthium spinosum – spiny cocklebur
Xanthium strumarium – cocklebur

BORAGINACEAE – BORAGE FAMILY

Amsinckia menziesii var. intermedia – common fiddleneck
Amsinckia menziesii var. menziesii – rigid fiddleneck
Amsinckia tessellata var. *tessellata* – devil's lettuce
Cryptantha sp. – forget-me-not
Cryptantha intermedia – common forget-me-not
Cryptantha micrantha – purple root cryptantha
Cryptantha microstachys – Tejon cryptantha
Cryptantha muricata – prickly cryptantha
Cryptantha nevadensis – Nevada catseye
Heliotropium curassavicum – wild heliotrope
Pectocarya linearis – slender pectocarya
Pectocarya penicillata – winged pectocarya
Pectocarya setosa – pectocarya
Plagiobothrys sp. – popcorn flower
Plagiobothrys arizonicus – Arizona popcornflower
Plagiobothrys canescens – valley popcornflower
Plagiobothrys collinus – California popcornflower
Plagiobothrys fulvus – fulvous popcornflower
Plagiobothrys nothofulvus – rusty popcornflower

APPENDIX A (*Cont.*)

BRASSICACEAE – MUSTARD FAMILY

* *Brassica nigra* – black mustard
* *Capsella bursa-pastoris* – shepard's purse
* *Cardaria draba* – heart-podded hoary cress
Erysimum capitatum ssp. *capitatum* – western wallflower
* *Hirschfeldia incana* – short-podded mustard
Lepidium virginicum – wild peppergrass
* *Raphanus sativus* – wild radish
* *Rorippa nasturtium-aquaticum* – water cress
* *Sisymbrium irio* – London rocket
* *Sisymbrium orientale* – Oriental mustard
Thysanocarpus curvipes – hairy fringepod
Thysanocarpus laciniatus – lacepod
Tropidocarpum gracile – slender dobie-pod

CACTACEAE – CACTUS FAMILY

Opuntia basilaris var. *basilaris* – beavertail
Opuntia californica var. *parkeri* – cane cholla
* *Opuntia ficus-indica* – Indian-fig
Opuntia littoralis – coastal prickly-pear
Opuntia parryi – snake cholla

CAPPARACEAE – CAPER FAMILY

Isomeris arborea – bladderpod

CAPRIFOLIACEAE – HONEYSUCKLE FAMILY

Lonicera subspicata – southern honeysuckle
Sambucus mexicana – Mexican elderberry

CARYOPHYLLACEAE – PINK FAMILY

Loeflingia squarrosa – California loeflingia
* *Silene gallica* – common catchfly
Spergularia sp. – sand-spurrey
* *Spergularia rubra* – sand-spurrey
* *Stellaria media* – common chickweed

APPENDIX A (*Cont.*)

CHENOPODIACEAE – GOOSEFOOT FAMILY

Atriplex canescens – four-winged saltbush
* *Atriplex heterosperma* – weedy orache
Atriplex lentiformis – big saltbush
* *Atriplex rosea* – redscale
* *Atriplex semibaccata* – Australian saltbush
Atriplex serenana var. *serenana* – bractscale
* *Atriplex suberecta* – peregrine saltbush
* *Bassia hyssopifolia* – five-hooked bassia
* *Chenopodium album* – lamb's quarters
* *Chenopodium ambrosioides* – Mexican tea
Chenopodium berlandieri – pitseed goosefoot
Chenopodium californicum – California goosefoot
* *Chenopodium murale* – nettle-leaved goosefoot
Chenopodium sp. – chenopod
* *Salsola tragus* – Russian-thistle

CONVOLVULACEAE – MORNING-GLORY FAMILY

Calystegia macrostegia ssp. *cyclostegia* – morning-glory
Calystegia peirsonii – Peirson’s morning-glory
* *Convolvulus arvensis* – bindweed

CRASSULACEAE – STONECROP FAMILY

Crassula connata – dwarf stonecrop
Dudleya lanceolata – lanceleaf dudleya

CUCURBITACEAE – GOURD FAMILY

Cucurbita foetidissima – coyote-melon, calabazilla
Marah horridus – Sierran wild cucumber
Marah macrocarpus – wild cucumber

CUSCUTACEAE – DODDER FAMILY

Cuscuta californica – California dodder

APPENDIX A (*Cont.*)

EUPHORBIACEAE – SPURGE FAMILY

Chamaesyce albomarginata – rattlesnake spurge
Chamaesyce polycarpa – small-seed sand mat
Croton californicus – California croton
Eremocarpus setigerus – doveweed
Stillingia linearifolia – linear-leaved stillingia

FABACEAE – PEA FAMILY

Astragalus didymocarpus – common dwarf locoweed
Astragalus gambelianus – Gambell's dwarf locoweed
Astragalus trichopodus var. *phoxus* – Santa Barbara locoweed
Lotus hamatus – grab lotus
Lotus humistratus – hill lotus
Lotus purshianus – Spanish-clover
Lotus salsuginosus – coastal lotus
Lotus scoparius – deerweed
Lotus strigosus – strigose deerweed
Lotus wrangelianus – Chilean birds-foot trefoil
Lupinus bicolor – Lindley's annual lupine
Lupinus excubitus var. *hallii* – grape soda lupine
Lupinus formosus var. *formosus* – lupine
Lupinus hirsutissimus – stinging lupine
Lupinus microcarpus – chick lupine
Lupinus microcarpus var. *densiflorus* – chick lupine
Lupinus sparsiflorus – Coulter's lupine
Lupinus succulentus – arroyo lupine
Lupinus truncatus – collar lupine
* *Medicago polymorpha* – California burclover
* *Melilotus alba* – white sweet-clover
* *Melilotus indica* – yellow sweet-clover
* *Robinia pseudoacacia* – black locust
Trifolium albopurpureum – Indian clover
Trifolium ciliolatum – tree clover
Trifolium gracilentum – pinpoint clover
Trifolium hirtum – rose clover
Trifolium sp. – clover

APPENDIX A (*Cont.*)

Trifolium willdenovii – valley clover
* *Vicia villosa* – winter vetch

FAGACEAE – BEECH FAMILY
Quercus agrifolia – coast live oak
Quercus berberidifolia – scrub oak
Quercus berberidifolia x *lobata*
Quercus c.f. douglasii – blue oak
Quercus lobata – valley oak
* *Quercus ilex* – holly oak

GERANIACEAE – GERANIUM FAMILY
* *Erodium botrys* – broad-lobed filaree
* *Erodium cicutarium* – red-stemmed filaree
* *Erodium moschatum* – white-stemmed filaree

GROSSULARIACEAE – CURRANT FAMILY
Ribes aureum – golden currant

HYDROPHYLLACEAE – WATERLEAF FAMILY
Emmenanthe penduliflora – whispering bells
Eriodictyon crassifolium var. *nigrescens* – yerba santa
Eucrypta chrysanthemifolia – common eucrypta
Phacelia cicutaria – caterpillar phacelia
Phacelia distans – blue fiddleneck
Phacelia imbricata – imbricate phacelia
Phacelia minor – wild canterbury-bell
Phacelia ramosissima – shrubby phacelia
Phacelia tanacetifolia – tansy-leaved phacelia

JUGLANDACEAE – WALNUT FAMILY
Juglans californica – southern California black walnut

LAMIACEAE – MINT FAMILY
* *Marrubium vulgare* – horehound
Salvia apiana – white sage

APPENDIX A (*Cont.*)

Salvia columbariae – chia
Salvia leucophylla – purple sage
Salvia mellifera – black sage
Trichostema lanceolatum – vinegar weed

MALVACEAE – MALLOW FAMILY

Malacothamnus fasciculatus – mesa bushmallow
* *Malva parviflora* – cheeseweed

NYCTAGINACEAE – FOUR O'CLOCK FAMILY

Mirabilis californica – California wishbone-bush

OLEACEAE – OLIVE FAMILY

* *Ligustrum lucidum* – glossy privet

ONAGRACEAE – EVENING-PRIMROSE FAMILY

Camissonia bistorta – California sun cup
Camissonia boothii var. *decorticans* – shredding evening primrose
Camissonia californica – mustard primrose
Camissonia hirtella – field suncup
Camissonia micrantha – miniature suncup
Camissonia robusta – robust suncup
Clarkia purpurea – winecup clarkia
Clarkia speciosa – red-spotted clarkia
Clarkia unguiculata – elegant clarkia
Epilobium brachycarpum – annual fireweed
Epilobium canum – California fuchsia

PAEONIACEAE – PEONY FAMILY

Paeonia californica – California peony

PAPAVERACEAE – POPPY FAMILY

Eschscholzia californica – California poppy
Platystemon californicum – cream cups

APPENDIX A (*Cont.*)

PLANTAGINACEAE – PLANTAIN FAMILY

Plantago erecta – dot-seed plantain
* *Plantago lanceolata* – English plantain
* *Plantago major* – common plantain
* *Plantago ovata* – woolly plantain

POLEMONIACEAE – PHLOX FAMILY

Eriastrum densifolium ssp. *densifolium* – dense eriastrum
Eriastrum densifolium ssp. *elongatum* – dense eriastrum
Eriastrum sapphirinum – sapphire eriastrum
Gilia angelensis – angel gilia
Gilia capitata – ball gilia
Leptodactylon californicum – prickly phlox
Linanthus androsaceus – common linanthus
Linanthus liniflorus – narrowflower flaxplower
Linanthus parviflorus – false babystars
Navarretia atractyloides – holly-leaf skunkweed

POLYGONACEAE – BUCKWHEAT FAMILY

Chorizanthe parryi var. *fernandina* – San Fernando Valley spineflower
Chorizanthe staticoides – turkish rugging
Eriogonum elongatum – long-stemmed buckwheat
Eriogonum fasciculatum ssp. *foliolosum* – California buckwheat
Eriogonum foliosum – leafy buckwheat
E. gracile var. gracile – slender woolly buckwheat
Eriogonum viridescens – twotooth buckweat
Lastarriaea coriacea – lastarriaea
* *Polygonum arenastrum* – common knotweed
Pterostegia drymarioides – California threadstem
Rumex hymenosepalus – desert rhubarb
* *Rumex crispus* – curly dock

PORTULACACEAE – PURSLANE FAMILY

Calandrinia ciliata – redmaids
Claytonia parviflora – miner's lettuce

APPENDIX A (*Cont.*)

Claytonia perfoliata – miner's lettuce
* *Portulaca oleracea* – common purslane

RANUNCULACEAE – BUTTERCUP FAMILY

Clematis ligusticifolia – yerba de chiva
Delphinium parryi ssp. *parryi* – Parry's larkspur

RHAMNACEAE – BUCKTHORN FAMILY

Ceanothus crassifolius – hoary-leaved ceanothus
Rhamnus crocea – redberry
Rhamnus ilicifolia – holly-leaf redberry

ROSACEAE – ROSE FAMILY

Adenostoma fasciculatum – chamise
Cercocarpus betuloides var. *betuloides* – birch-leaf mountain-mahogany
Cercocarpus betuloides var. *blancheae* – island mountain-mahogany
Fragaria sp. – strawberry
Heteromeles arbutifolia – toyon
Prunus ilicifolia – holly-leaf cherry

RUBIACEAE – MADDER FAMILY

* *Galium aparine* – goose grass
Galium angustifolium – narrow-leaved bedstraw
Galium porrigens – climbing bedstraw

SALICACEAE – WILLOW FAMILY

Populus fremontii – Fremont's cottonwood
Salix exigua – narrow-leaved willow
Salix laevigata – red willow
Salix lasiolepis – arroyo willow

SAURURACEAE – LIZARD'S-TAIL FAMILY

Anemopsis californica – yerba mansa

APPENDIX A (*Cont.*)

SCROPHULARIACEAE – FIGWORT FAMILY

Castilleja exserta – common owl's-clover
Castilleja foliolosa – indian painbrush
Keckiella cordifolia – heart-leaf penstemon
Mimulus aurantiacus – bush monkeyflower
Penstemon centranthifolius – scarlet bugler
* *Veronica anagalis-aquatica* – water speedwell

SOLANACEAE – NIGHTSHADE FAMILY

Datura wrightii – western jimsonweed
* *Nicotiana glauca* – tree tobacco
Solanum americanum – small-flowered nightshade
Solanum parishii – nightshade
Solanum xanti – chaparral nightshade

STERCULIACEAE – CACAO FAMILY

* *Fremontodendron californicum* x *mexicanum* – flannelbush cultivar (ornamental planting observed adjacent to Magic Mountain theme park)

TAMARICACEAE – TAMARISK FAMILY

* *Tamarix ramosissima* – Mediterranean tamarisk

URTICACEAE – NETTLE FAMILY

Urtica dioica – giant creek nettle
* *Urtica urens* – dwarf nettle

VIOLACEAE – VIOLET FAMILY

Viola pedunculata – Johnny jump-up

VITACEAE – GRAPE FAMILY

Parthenocissus vitacea – woodbine

ZYGOPHYLLACEAE – CALTROP FAMILY

* *Tribulus terrestris* – puncture vine

APPENDIX A (*Cont.*)

ANGIOSPERMAE (MONOCOTYLEDONES)

CYPERACEAE – SEDGE FAMILY

Cyperus esculentus – nutsedge

LILIACEAE – LILY FAMILY

Bloomeria crocea – common goldenaster
Brodiaea terrestris ssp. *kernensis* – brodiaea
Calochortus c.f. catalinae – Catalina mariposa lily
Calochortus c.f. plummerae – Plummer's mariposa lily
Calochortus clavatus var. *gracilis* – slender mariposa lily
Calochortus venustus – mariposa lily
Chlorogalum pomeridianum – wavy-leaf soap-plant
Dichelostemma capitatum – blue dicks
Muilla maritima – common muilla
Yucca schidigera – Mohave yucca
Yucca whipplei – Our Lord's candle

POACEAE – GRASS FAMILY

* *Avena barbata* – slender oat
* *Avena fatua* – wild oat
* *Avena sativa* – cultivated oat
Bromus arizonicus – Arizona chess
Bromus catharticus – rescue grass
* *Bromus diandrus* – ripgut grass
* *Bromus hordeaceus* – soft chess
* *Bromus madritensis* ssp. *rubens* – foxtail chess
* *Bromus sterilis* – poverty brome
* *Bromus tectorum* – cheat grass
* *Cynodon dactylon* – Bermuda grass
Distichlis spicata – salt grass
Elymus glaucus – western wild rye
Hordeum brachyantherum – meadow barley
* *Hordeum murinum* – glaucous foxtail barley
* *Hordeum vulgare* – cultivated barley
* *Lamarckia aurea* – goldentop

APPENDIX A (*Cont.*)

Leptochloa uninervia – Mexican sprangletop
Leymus tritocoides – beardless wild rye
Melica imperfecta – California melic
Nassella cernua – nodding needlegrass
Nassella lepida – foothill stipa
Nassella pulchra – purple needlegrass
* *Piptatherum miliaceum* – smilo grass
Poa secunda – Malpais bluegrass
Polypogon interruptus – ditch beard grass
* *Polypogon monspeliensis* – rabbit's-foot grass
* *Schismus barbatus* – abumashi
* *Triticum aestivum* – cereal wheat
Vulpia microstachys – small fescue
* *Vulpia myuros* – rattail fescue

TYPHACEAE – CATTAIL FAMILY

Typha latifolia – broad-leaved cattail

* signifies introduced (non-native) species

APPENDIX B

Wildlife Species Observed 2000-2006

APPENDIX B
WILDLIFE SPECIES OBSERVED

WILDLIFE SPECIES -VERTEBRATES

REPTILES

(Source: *Dudek wildlife survey 2006*)

IGUANIDAE - IGUANID LIZARDS

Sceloporus occidentalis - western fence lizard

BIRDS

(Source: *Guthrie 2004, Guthrie 2000, Dudek wildlife survey 2006*)

ARDEIDAE - HERONS

Botaurus lentiginosus - American bittern

ANATIDAE - WATERFOWL

Anas platyrhynchos - mallard

CATHARTIDAE - NEW WORLD VULTURES

Cathartes aura - turkey vulture

ACCIPITRIDAE - HAWKS

Accipiter cooperii - Cooper's hawk
Buteo jamaicensis - red-tailed hawk
Buteo lineatus - red-shouldered hawk
Elanus leucurus - white-tailed kite

FALCONIDAE - FALCONS

Falco sparverius - American kestrel

PHASIANIDAE - PHEASANTS & QUAILS

Callipepla californica - California quail

CHARADRIIDAE - PLOVERS

Charadrius vociferus – killdeer

APPENDIX B (*Cont.*)

COLUMBIDAE - PIGEONS & DOVES

* *Columba livia* - rock dove
Zenaida macroura - mourning dove

CUCULIDAE - CUCKOOS & ROADRUNNERS

Geococcyx californianus - greater roadrunner

STRIGIDAE - TRUE OWLS

Bubo virginianus - great horned owl

APODIDAE - SWIFTS

Aeronautes saxatalis - white-throated swift
Chaetura vauxi - Vaux's swift

TROCHILIDAE - HUMMINGBIRDS

Archilochus alexandri - black-chinned hummingbird
Calypte anna - Anna's hummingbird
Calypte costae - Costa's hummingbird
Selasphorus sasi - Allen's hummingbird

PICIDAE - WOODPECKERS

Colaptes auratus - northern flicker
Picoides nuttallii - Nuttall's woodpecker
Picoides pubescens - downy woodpecker

TYRANNIDAE - TYRANT FLYCATCHERS

Myiarchus cinerascens - ash-throated flycatcher
Sayornis nigricans - black phoebe
Sayornis saya - Say's phoebe
Tyrannus vociferans - Cassin's kingbird
Tyrannus verticalis - western kingbird

HIRUNDINIDAE - SWALLOWS

Hirundo rustica - barn swallow
Petrochelidon pyrrhonota - cliff swallow
Stelgidopteryx serripennis - northern rough-winged swallow

APPENDIX B (*Cont.*)

Tachycineta bicolor - tree swallow
Tachycineta thalassina - violet-green swallow

CORVIDAE - JAYS & CROWS
Aphelocoma californica - western scrub-jay
Corvus brachyrhynchos - American crow
Corvus corax - common raven

PARIDAE - TITMICE
Baeolophus inornatus - oak titmouse

AEGITHALIDAE - BUSHTITS
Psaltriparus minimus - bushtit

TROGLODYTIDAE - WRENS
Salpinctes obsoletus - rock wren
Thryomanes bewickii - Bewick's wren
Troglodytes aedon - house wren

SYLVIIDAE - GNATCATCHERS
Polioptila caerulea - blue-gray gnatcatcher

TURDIDAE - THRUSHES & BABBLERS
Sialia mexicana - western bluebird
Turdus migratorius - American robin

TIMALIIDAE - LAUGHINGTHRUSH AND WRENTIT
Chamaea fasciata - wrentit

MIMIDAE - THRASHERS
Mimus polyglottos - northern mockingbird
Toxostoma redivivum - California thrasher

BOMBYCILLIDAE - WAXWINGS
Bombycilla cedrorum - cedar waxwing

APPENDIX B (*Cont.*)

PTILOGONATIDAE - SILKY-FLYCATCHERS

Phainopepla nitens - phainopepla

LANIIDAE - SHRIKES

Lanius ludovicianus - loggerhead shrike

STURNIDAE - STARLINGS

* *Sturnus vulgaris* - European starling

PARULIDAE - WOOD WARBLERS

Dendroica petechia - yellow warbler
Geothlypis trichas - common yellowthroat
Vermivora celata - orange-crowned warbler
Wilsonia pusilla - Wilson's warbler

EMBERIZIDAE - BUNTINGS & SPARROWS

Aimophila ruficeps - rufous-crowned sparrow
Chondestes grammacus - lark sparrow
Melospiza melodia - song sparrow
Pipilo crissalis - California towhee
Pipilo maculatus - spotted towhee
Zonotrichia leucophrys - white-crowned sparrow

CARDINALIDAE - CARDINALS AND GROSBEAKS

Passerina amoena - lazuli bunting
Passerina caerulea - blue grosbeak
Pheucticus melanocephalus - black-headed grosbeak

ICTERIDAE - BLACKBIRDS & ORIOLES

Euphagus cyanocephalus - Brewer's blackbird
Icterus cucullatus - hooded oriole
Icterus bullockii - Bullock’s oriole
Molothrus ater - brown-headed cowbird
Sturnella neglecta - western meadowlark

APPENDIX B (*Cont.*)

FRINGILLIDAE - FINCHES

Carpodacus mexicanus - house finch
Carduelis psaltria - lesser goldfinch
Carduelis tristis - American goldfinch

PASSERIDAE - OLD WORLD SPARROWS

* *Passer domesticus* - house sparrow

MAMMALS

(Source: *Dudek wildlife survey 2006*)

LEPORIDAE - HARES & RABBITS

Sylvilagus spp. - cottontail

SCIURIDAE - SQUIRRELS

Spermophilus beecheyi - California ground squirrel

MURIDAE - RATS & MICE

Neotoma sp. - woodrat

CANIDAE - WOLVES & FOXES

Canis latrans - coyote

MUSTELIDAE - WEASELS, SKUNKS, & OTTERS

Mustela frenata - long-tailed weasel

FELIDAE - CATS

Lynx rufus - bobcat

CERVIDAE - DEERS

Odocoileus hemionus - mule deer

APPENDIX B (*Cont.*)

WILDLIFE SPECIES - INVERTEBRATES

BUTTERFLIES AND MOTHS

(Source: *Compliance Biology 2004*)

HESPERIIDAE - SKIPPERS

Erynnis funeralis - funereal duskywing
Pyrgus albescens - checkered skipper
Heliopetes ericetorum - large white skipper
Ochlodes agricola - rural skipper

PAPILIONIDAE - SWALLOWTAILS

Papilio rutulus - tiger swallowtail
Papilo zelicaon lucas - anise swallowtail

PIERIDAE - WHITES AND SULFURS

Anthocharis sara sara - Pacific Sara orangetip
Colias eurydice - California dogface
Colias eurytheme – alfalfa butterfly
Pieris rapae rapae - cabbage butterfly
Pontia protodice - common white
Pontia sisymbrii - California white

RIODINIDAE - METALMARKS

Apodemia mormo virgulti - Behr's metalmark

LYCAENIDAE - BLUES, HAIRSTREAKS, & COPPERS

Atlides halesus estesi - great purple hairstreak
Brephidium exilis –pygmy blue
Euphilotes bernardino - Bernardino blue
Glaucopsyche lygdamus australis – southern blue
Hemiargus isola alce – Reakirt's blue
Icaria acmon acmon - acmon blue
Strymon melinus pudica - common hairstreak

APPENDIX B (*Cont.*)

NYMPHALIDAE - BRUSH-FOOTED BUTTERFLIES

Coenonympha californica californica - California ringlet
Danaus plexippus – monarch
Euphydryas chalcedona – Chalcedon checkerspot
Junonia coenia - buckeye
Vanessa annabella – west coast lady
Vanessa atalanta – red admiral
Vanessa cardui - painted lady

* signifies introduced (non-native) species

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