LYONS CANYON RANCH
BIOLOGICAL TECHNICAL REPORT

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December 10, 2004

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1.0 INTRODUCTION

This Biological Technical Report has been prepared to support the California Environmental Quality Act (CEQA) documentation for the proposed Lyons Canyon Ranch project (hereafter referred to as the project site). This information has been reported in accordance with accepted scientific and technical standards that are consistent with the requirements of the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).

1.1 REGIONAL ENVIRONMENTAL SETTING

The 357.9-acre project site is located in the Santa Clarita Valley, in unincorporated Los Angeles County, adjacent to the City of Santa Clarita (Exhibit 1). The project site is located approximately four miles south of the Santa Clara River and approximately one-quarter mile west of the South Fork Santa Clara River. The Old Road and Interstate-5 (I-5) are immediately adjacent to east of the project site. The Santa Susana Mountains are immediately west and southwest of the project site; and the Liebre Mountains are located to northeast. The project site is found in the northern portion of the Oat Mountain and the southern portion of the Newhall U.S. Geological Survey (USGS) 7.5 x 15-minute quadrangle maps.

1.2 LOCAL ENVIRONMENTAL SETTING

The project site is located west of I-5, south of Sagecrest Circle, and north of Towsley Canyon (Exhibit 2). Although the project site is mainly open space, evidence is found throughout the site of its historical use as a filming location. Surrounding land uses include residential homes and commercial retail to the north; open space to the west; open space of Towsley Canyon to the south; The Old Road and I-5 to the east; and a mix of open space, commercial retail, and residential homes further to the east. The topography of the project site is variable. A relatively flat area exists on the northeast portion of the project site. Other areas of the project site are hilly and many slopes rise steeply to cliff faces. Lyons Canyon Creek, a seasonal watercourse located in the center of the project site, and an unnamed seasonal drainage that drains from Towsley Canyon along the southeastern corner of the project site, both conduct water east off the site. Upon exiting the site, each watercourse becomes channelized as it flows underneath I-5. Both streams serve as tributaries to the South Fork Santa Clara River. Elevation on the project site ranges from 1,325 to 1,702 feet above mean sea level (msl). Soils on the project site are Castaic Balcom silty clay loam, Castaic Saugus soils, Hanford sandy loam, Millsholm rocky loam, Saugus Yolo loam and Zamora loam. The Simi Fire burned the entire project site in October of 2003.

The project site is located within Significant Ecological Areas (SEA) #20 and #63. Los Angeles County defines an SEA as ecologically important or fragile land and water areas, valuable as plant and animal communities. These areas are classified as one or more of the following: 1) habitats for rare and endangered species of plants and animals; 2) restricted natural communities - ecological areas which are scarce on a regional basis; 3) habitat restricted in

Regional Location

Exhibit 1

Lyons Canyon Ranch

10 5 0 10 Miles

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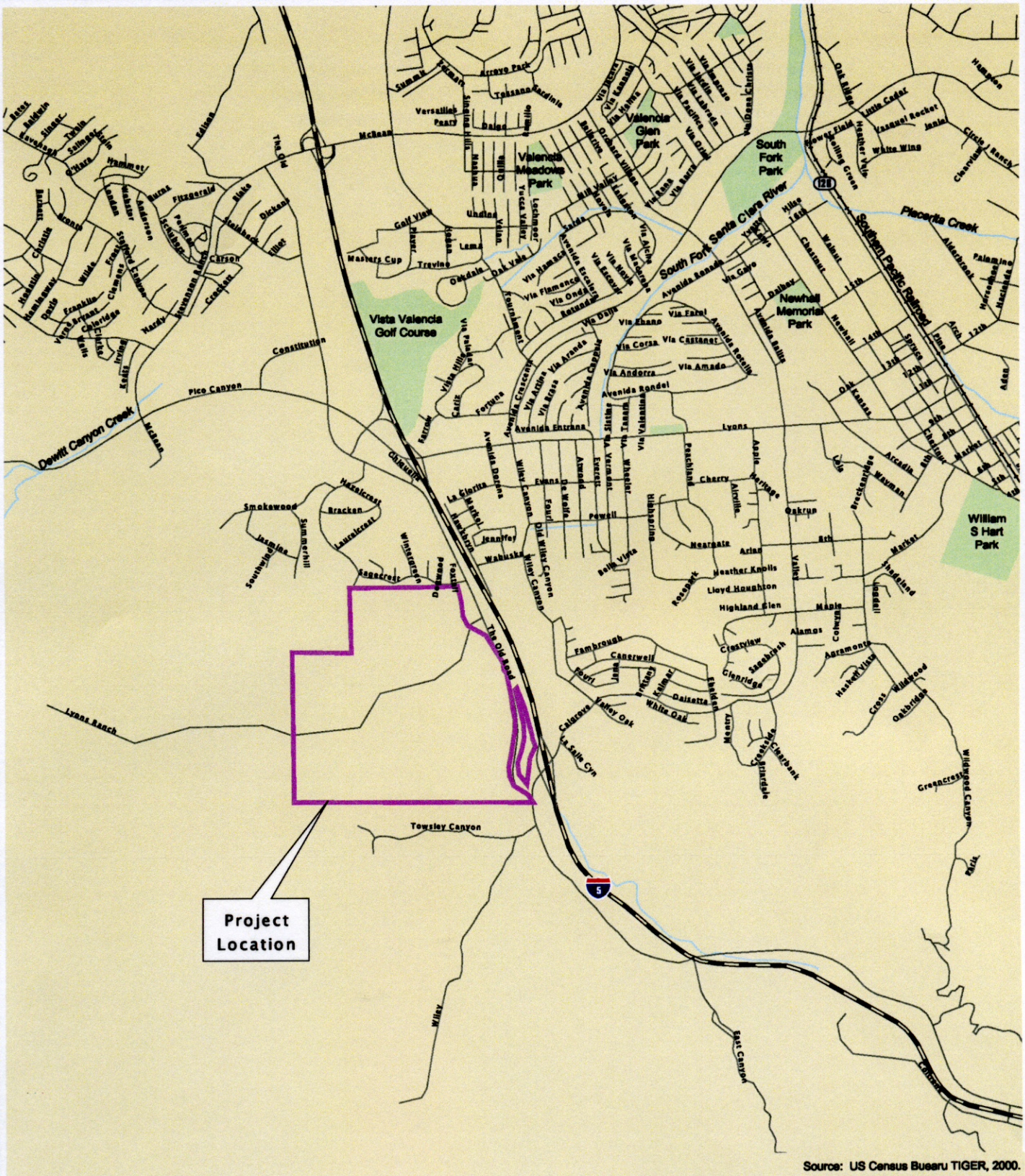

Local Vicinity

Exhibit 2

Lyons Canyon Ranch

N W E S

0.25 0 0.25 0.5 Miles

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distribution in the county; 4) breeding or nesting grounds; 5) unusual biotic communities; 6) sites with critical wildlife and fish value; and 7) relatively undisturbed habitat (PCR 2000). Approximately 14.89 acres of the southernmost portion of the project site are located within SEA #20 Santa Susana Mountains and approximately 11.61 acres the project site are located within SEA #63 Lyons Canyon (DMEC 2004a). Development within or adjacent to an SEA requires a review by the Los Angeles County Significant Ecological Areas Technical Advisory Committee (SEATAC).

1.3 PROJECT DESCRIPTION

The project proposes development of a subdivision of approximately 357.9 acres into 183 lots consisting of 416 single-family residential units, 216 multi-family units, 203 senior housing units, two passive parks totaling 16.9 acres, a 0.6-acre neighborhood park, 197.8 acres of open space, and 7.1 acres of commercial uses. An annexation is required to change governance of the 357.9-acre project site from unincorporated Los Angeles County to the City of Santa Clarita.

2.0 SURVEY METHODOLOGIES

The data provided in this report was taken from general and focused surveys of the project site conducted by BonTerra Consulting in Spring 2003 and Spring 2004. In addition, other pertinent information was obtained from studies and other documentation prepared by biologists who have previously conducted studies on the project site and in the region.

2.1 GENERAL PLANT AND VEGETATION MAPPING SURVEYS

A literature review was conducted prior to the initiation of the general plant and vegetation mapping surveys in order to determine the potential special status plant species known to occur in the project region that may occur on the project site. The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2004) and CDFG's Natural Diversity Database (CNDDB) (CDFG 2004) were reviewed. The Newhall, Oat Mountain, and neighboring Mint Canyon, San Fernando, Val Verde, and Simi Valley quadrangles were queried during the CNDDB records search. In addition, the compendia of special status species published by the USFWS and CDFG were also reviewed.

General plant surveys were conducted on May 13, 28, and 29, 2003 by BonTerra Consulting Ecologist Weena Sangkatavat and Consulting Biologist Mike Couffer. The purpose of the surveys was to describe the vegetation present on the project site and evaluate the potential of the habitats to support special status plant species. All plant species observed were recorded in field notes and are listed in Table A-1 of Appendix A. Plant species were identified in the field or collected for later identification. Plants were identified using taxonomic keys in Hickman (1993), Munz (1974), and Abrams (1923-1951, 1960). Taxonomy follows Hickman (1993) for scientific and common names.

Vegetation on the project site was delineated and classified into vegetation types based on the *List of California Terrestrial Natural Communities Recognized by the Natural Diversity Data Base* (CDFG 2003). This classification system is based on *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) and *Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). Mapping was performed by Ms. Sangkatavat and Mr. Couffer and done on an aerial photograph with a topographic overlay. The scale of this map was 1 inch equals 200 feet. Vegetation mapping was performed prior to the Simi Fire in October 2003.

2.2 GENERAL WILDLIFE SURVEYS

General surveys for fish, amphibians, reptiles, birds, and mammals were conducted on May 28, and 29, 2003, and March 30, 2004. A list of wildlife species observed on the project site was compiled from both wildlife surveys and vegetation mapping and are listed in Table A-2 of Appendix A.

During the surveys, the project site was evaluated for its potential to support special status wildlife species that are known or are expected to occur in the region. All wildlife species detected during the course of the surveys were documented in field notes. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign, including scat, footprints, scratch-outs, dust bowls, burrows, and trails.

2.3 FOCUSED SURVEYS

2.3.1 FOCUSED PLANT SURVEYS

Initial focused plant surveys were conducted by Jacqueline Bowland Worden and Trish Munro of Bowland & Associates on June 3, 4, 5, and July 30, 2003. Due to the Simi Fire that burned the entire project site in October 2003, Pam DeVries of BonTerra Consulting and Scott White of White & Leatherman Consulting repeated focused plant surveys on May 18 and June 14, 2004. Often new plant species bloom in the spring following a fire. Meandering transects were used to cover areas of suitable habitat on the project site. Locations of any special status species found were recorded in field notes and on a topographic map. Voucher specimens were collected for special status plant species and deposited in a herbarium at the Rancho Santa Ana Botanic Garden to ensure accuracy in identification.

All plant species observed were identified in the field or collected for later identification. Plants were identified using keys, descriptions, and illustrations in Hickman (1993), Munz (1974), and other regional references. All species observed on the project site are listed in Appendix A. In conformance with CDFG guidelines (CDFG 2000), surveys were (a) conducted during flowering seasons for the special status plants known from the area, (b) floristic in nature, (c) consistent with conservation ethics, (d) designed to systematically cover all habitat types on the site, and

(e) well documented, by this report and by voucher specimens deposited at the Rancho Santa Ana Botanic Garden herbarium.

In addition, a delineation of jurisdictional waters and riparian habitats and an oak tree survey were performed by David Magney Environmental Consulting.

2.3.2 FOCUSED WILDLIFE SURVEYS

No focused surveys for wildlife were performed in Spring 2004 due to the Simi Fire. BonTerra Consulting Senior Scientist Mike Robson visited the project site on March 30, 2004 to verify wildlife habitat conditions following the fire. Little to no habitat for special status wildlife species remained on the project site during the Spring of 2004, therefore, no focused surveys were preformed.

3.0 EXISTING BIOLOGICAL RESOURCES

This section describes the biological resources that either occur or potentially occur on the project site. Vegetation types, wildlife populations and movement patterns, special status vegetation types, and special status plant and wildlife species either known or potentially occurring on the project site are discussed below.

3.1 VEGETATION TYPES

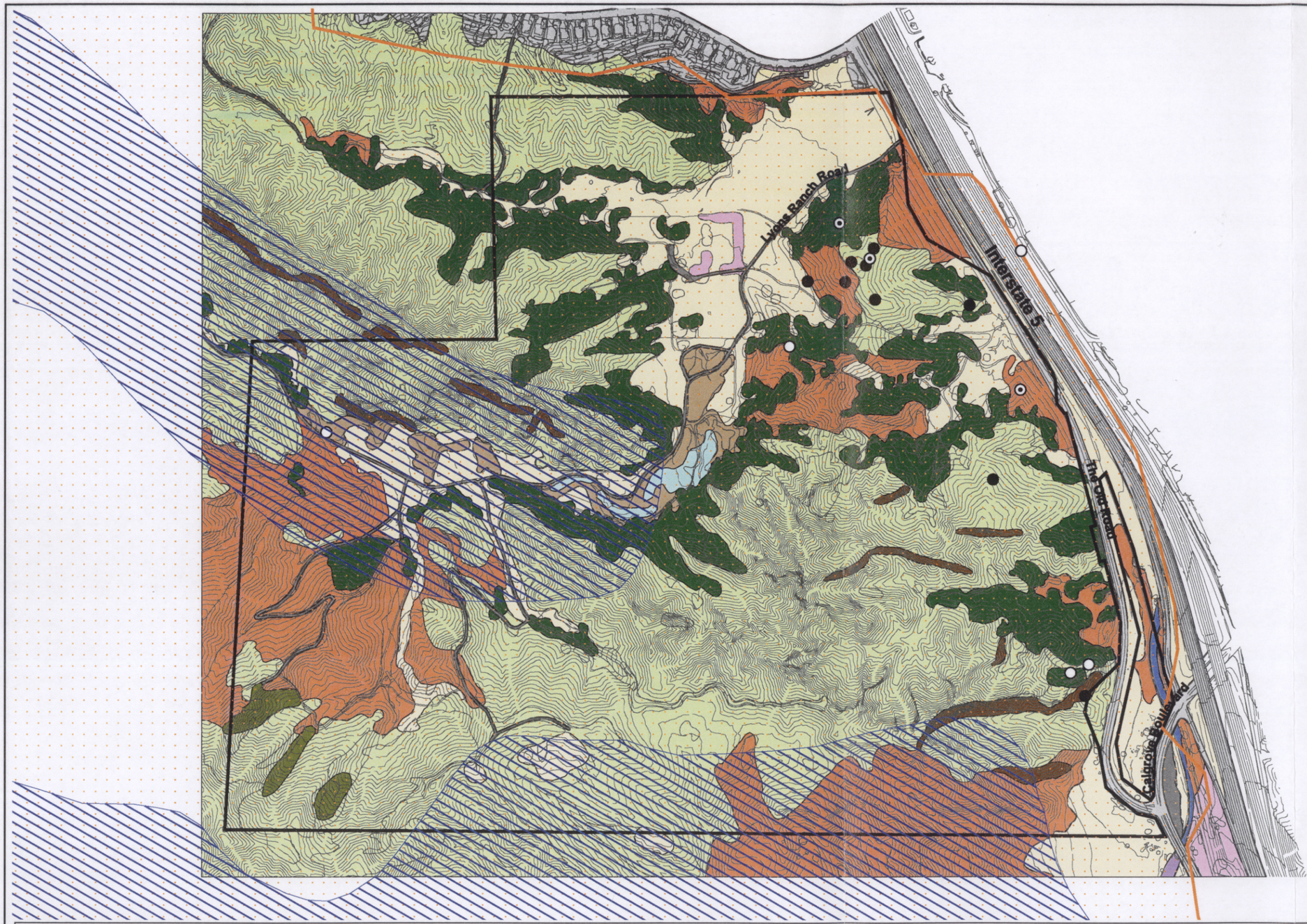
Vegetation types and disturbed areas that occur on the project site were mapped prior to the 2003 Simi Fire. Exhibit 3 illustrates the distribution of the vegetation types and the extent of fire damage on the project site. Given enough time, vegetation on the project site is expected to recover and reflect conditions prior to the Simi Fire. Appendix A contains a list of all the plant species observed during surveys on the project site.

3.1.1 MULE FAT SCRUB

Mule fat scrub occurs centrally, along Lyons Ranch Road, on the project site. This vegetation type occurs along Lyons Canyon Creek that bisects the project site. The dominant plant species in this vegetation type is mule fat (*Baccharis salicifolia*). Other species present in lower densities include tree tobacco (*Nicotiana glauca*), poison oak (*Toxicodendron diversilobum*), and dwarf nettle (*Urtica urens*).

3.1.2 WILLOW RIPARIAN WOODLAND

Willow riparian woodland occurs centrally on the project, along Lyons Ranch Road. Lyons Canyon Creek supports mugwort (*Artemisia douglasiana*), mule fat, western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), arroyo willow (*Salix lasiolepis*), and black willow (*Salix gooddingii*).



- October 2003 Wildfire Burn Boundary
- Project Boundary
- Significant Ecological Area Boundary

Vegetation Types

- Mule Fat Scrub
- Willow Riparian Woodland
- Gravelly Wash
- Coast Live Oak Woodland
- Southern California Walnut Woodland
- Coastal Sage Scrub
- Chaparral
- Cliff Face
- Non-Native Grassland
- Ornamental
- Disturbed
- Concrete Channel
- Developed

Special Status Species

- Plummer's Mariposa Lily
- Slender Mariposa Lily
- Slender Mariposa Lily Hybrid

Biological Resources

Exhibit 3

Lyons Canyon Ranch

N W E S

550 0 550 Feet

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3.1.3 GRAVELLY WASH

A gravelly wash occurs in the southeastern corner of the project site. This area is where the channelized portion of the South Fork of the Santa Clara River becomes a natural streambed. The streambed is covered by coarse gravel. Plant species observed growing in the gravelly wash include arroyo willow and mugwort.

3.1.4 COAST LIVE OAK WOODLAND

Coast live oak woodland occurs in the valleys between the steep hills on the project site. This vegetation type is dominated by coast live oak (*Quercus agrifolia*) and has an understory of California sagebrush (*Artemisia californica*), slender wild oat (*Avena barbarta*), tocalote (*Centaurea melitensis*), wild cucumber (*Marah macrocarpus*), and milk thistle (*Silybum marianum*).

3.1.5 SOUTHERN CALIFORNIA BLACK WALNUT WOODLAND

Southern California black walnut woodland occurs in the southwestern portion of the project site. These woodlands match descriptions by Holland (1986) of California walnut woodland; Sawyer and Keeler-Wolf (1995) of California walnut series; and fall within V. Holland's (1988) description of coastal oak woodland. This vegetation type is dominated by southern California black walnut (*Juglans californica*). Other species present in low densities include thick-leaf yerba santa (*Eriodictyon crassifolium*), holly-leaved cherry (*Prunus ilicifolia*), laurel sumac (*Malosma laurina*), and Mexican elderberry (*Sambucus mexicana*).

3.1.6 COASTAL SAGE SCRUB

Coastal sage scrub generally occurs on rolling hills of the lower areas on the project site and transitions into chaparral where hills become steep. The majority of coastal sage scrub on the project site occurs along the western border, the southeastern border, and on a road cut along The Old Road. Coastal sage scrub is dominated by California sagebrush, mule fat, thick-leaf yerba santa, California buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*). One large patch of coastal sage scrub, along The Old Road and just south of Lyons Ranch Road, is a monotypic stand of California buckwheat. This particular patch of coastal sage scrub most likely originated from seed, following construction of The Old Road. Coastal sage scrub ranges in height from four to five feet tall.

3.1.7 CHAPARRAL

Chaparral occurs on the majority of the project site. This vegetation type is composed of chamise (*Adenostoma fasciculatum*), thick-leaf yerba santa, toyon (*Heteromeles arbutifolia*), laurel sumac, holly-leaved cherry, sugar bush (*Rhus ovata*), and Mexican elderberry. Other species present in low densities in this vegetation type include Our Lords candle (*Yucca whipplei*).

3.1.8 CLIFF FACE

Cliff faces occur on the southeastern and western portions of the project site. This vegetation type supports little vegetation on the dry, crumbling soil. The plant species observed in this vegetation type include Turkish rugging (*Chorizanthe staticoides*) and Our Lord's candle.

3.1.9 NON-NATIVE GRASSLAND

Non-native grassland is found on most level areas and overgrown roads on the project site. This vegetation type is located in the northeast portion of the project site and along Lyons Ranch Road and side roads. The dominant species of this vegetation type include non-native grasses and forbs. The dominant species present in this area include slender wild oat, wild oat (*Avena fatua*), black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), tocalote, red-stemmed filaree (*Erodium cicutarium*), and London rocket (*Sisymbrium irio*). Native forbs are scattered in these areas, including rancher's fiddleneck (*Amsinckia menziesii*), butterfly mariposa lily (*Calochortus venustus*), splendid mariposa lily (*Calochortus splendens*), and miniature lupine (*Lupinus bicolor*).

3.1.10 ORNAMENTAL

Ornamental vegetation occurs on the southeastern corner of the project site. This vegetation type includes landscaping including pine (*Pinus* sp.) and a non-native grass understory of oat species (*Avena* spp.).

3.1.11 DISTURBED

Disturbed areas on the project site are existing dirt roads. Limited vegetation occurs in this vegetation type and tends to be weedy. These plant species include tocalote and milk thistle.

3.1.12 CONCRETE CHANNEL

Concrete channel is the channelized portion of the South Fork of the Santa Clara River that flows beneath I-5. No vegetation was observed on the concrete bottom of the channel.

3.1.13 DEVELOPED

Developed areas are not a vegetation type and do not contain any substantial vegetation. However, these areas need to be delineated on the map for informational purposes. Developed areas on the project consist of the pump station on the southern edge of the site, a dirt road on the western edge, and paved roads on the southern and eastern boundary.

3.2 WILDLIFE INVENTORY

3.2.1 WILDLIFE

Fish

Most creeks and waterways in southern California are subject to periods of high water flow in winter and spring and little to no flow in late summer and fall. These creeks and waterways can support a variety of habitats, including willow woodland, mule fat scrub, and freshwater marsh. The herbaceous cover present varies by season from little to no cover during periods of high water flow to high coverage in late summer and fall. Native fish species that potentially inhabit this area have adapted to living in the naturally fluctuating conditions of the area. However, natural and man-made causes such as drought, alteration of habitat, and introduced species have contributed to the reduction of native fish populations in southern California.

No fish were observed in the stream during general surveys or following the Simi Fire.

Amphibians

Amphibians require moisture for at least a portion of their life cycle and many require standing or flowing water for reproduction. Terrestrial species may or may not require standing water for reproduction. These species are able to survive in dry areas by estivating (i.e., remaining beneath the soil in burrows or under logs and leaf litter, emerging only when temperatures are low and humidity is high). Many of these species' habitats are associated with water and they emerge to breed once the rainy season begins. Soil moisture conditions can remain high throughout the year in some habitat types, depending on factors such as the amount of vegetation cover, elevation, and slope aspect.

No amphibian species were observed during general wildlife surveys. Amphibian species expected to occur on the project site include the western toad (*Bufo boreas*), Pacific treefrog (*Hyla regilla*), and Pacific slender salamander (*Batrachoseps pacificus*). Other species that may occur include the black-bellied slender salamander (*Batrachoseps nigriventris*), California treefrog (*Hyla cadaverina*), and bullfrog (*Rana catesbeiana*).

Reptiles

Reptilian diversity and abundance typically vary with vegetation type and character. Many species prefer only one or two vegetation types; however, most will forage in a variety of habitats. Most species occurring in open areas use rodent burrows for cover, protection from predators, and extreme weather conditions.

Common reptile species observed during the survey included the side-blotched lizard (*Uta stansburiana*), and western fence lizard (*Sceloporus occidentalis*). Although no snake species were directly observed, the tracks of various snakes including rattlesnake (*Crotalus* sp.) were observed onsite. Common reptile species expected to occur on the project site include the

southern alligator lizard (*Elgaria multicarinatus*), western skink (*Eumeces skiltonianus*), California whipsnake (*Masticophis lateralis*), San Diego gopher snake (*Pituophis melanoleucus annectens*), California kingsnake (*Lampropeltis getula californiae*), night snake (*Hypsiglena torquata*), and southern pacific rattlesnake (*Crotalus viridis helleri*).

Birds

Resident bird species observed or expected on the project site include the mourning dove (*Zenaida macoura*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), western scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), bushtit (*Psaltriparus minimus*), Bewick's wren (*Thryomanes bewickii*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), common yellowthroat (*Geothlypis trichas*), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), and great-tailed grackle (*Quiscalus mexicanus*).

Birds of prey (raptors) observed or expected in the project site include the sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), barn owl (*Tyto alba*), great horned owl (*Bubo virginianus*), and turkey vulture (*Cathartes aura*).

Mammals

Mammals observed or detected on the project site include the desert shrew (*Notiosorex crawfordi*), Botta pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), California desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), and mule deer (*Odocoileus hemionus*). Small, ground dwelling mammals that potentially occur on the project site include the deer mouse (*Peromyscus maniculatus*), and the introduced house mouse (*Mus musculus*). Larger mammals expected on the project site include the Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), mountain lion (*Felis concolor*), and bobcat (*Lynx rufus*).

Bats occur throughout most of southern California and may use any portion of the project site as foraging habitat. Different bat species characteristically utilize different roosting habitats. Most of the bats that potentially occur on the project site are either inactive during the winter (hibernate) or migrate south of the region to warmer climates. Bats expected to forage in the project site include long-legged myotis (*Myotis volans*), California myotis (*Myotis californicus*), western pipistrelle (*Pipistrellus hesperus*), big brown bat (*Eptesicus fuscus*), and hoary bat (*Lasiurus cinereus*). Others that may occur include long-eared myotis (*Myoits evotis*), fringed myotis (*Myotis thysanodes*), and the Brazilian free-tailed bat (*Tadarida brasiliensis*)

3.2.2 WILDLIFE MOVEMENT

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space

areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990). Corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events, such as fire or disease, will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water, defending territories, or searching for mates, breeding areas, or cover). A number of terms such as "wildlife corridor," "travel route," "habitat linkage," and "wildlife crossing" have been used in various wildlife movement studies to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this analysis, these terms are defined as follows:

- *Travel route* – a landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and to provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food, water, and/or cover while moving between habitat areas and provides a relatively direct link between target habitat areas.

- *Wildlife corridor* – a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors, often referred to as "habitat or landscape linkages," can provide both transitory and resident habitat for a variety of species.

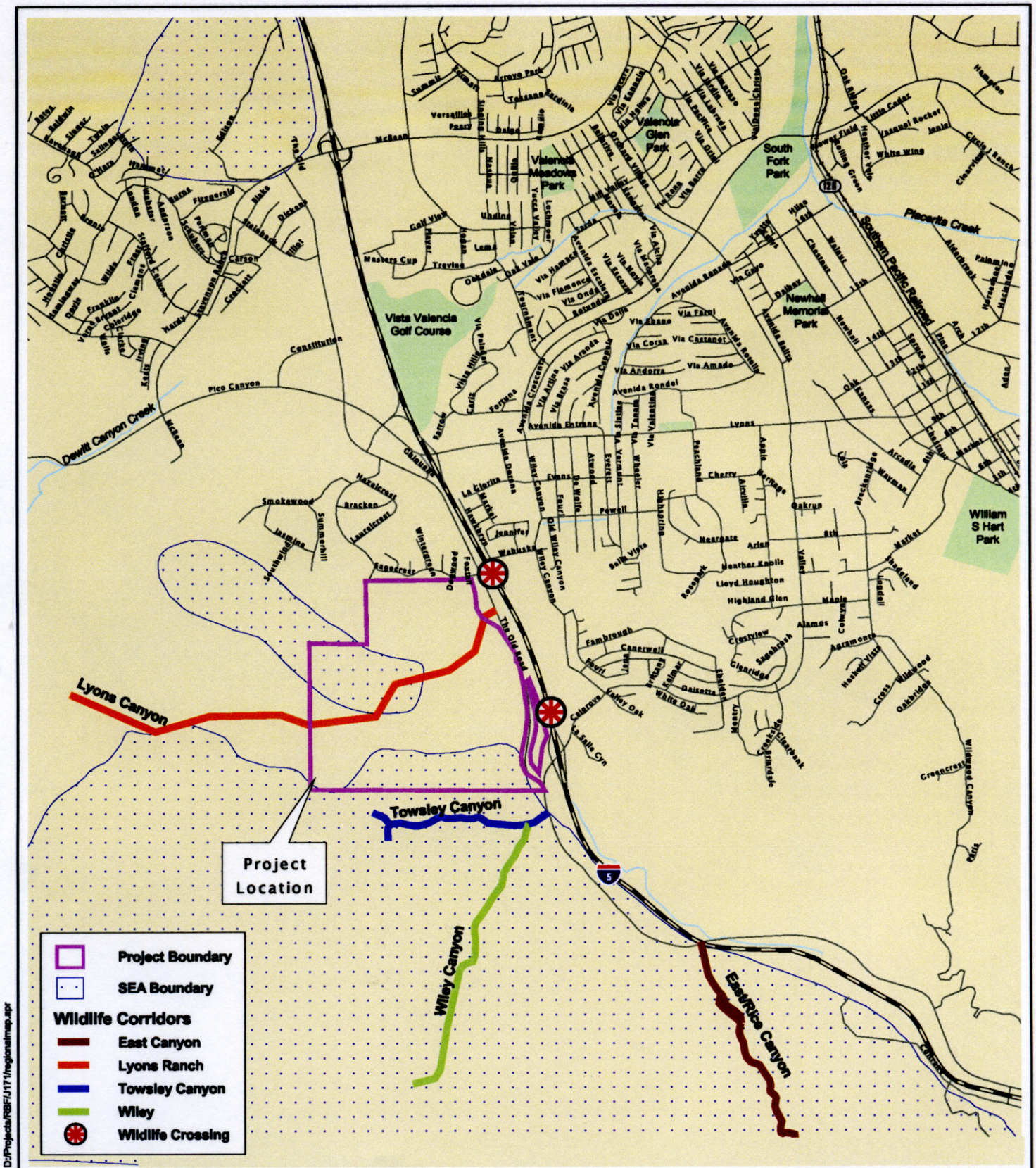
- *Wildlife crossing* – a small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and

include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent "choke points" along a movement corridor, which may impede wildlife movement and increase the risk of predation.

It is important to note that in a large open space area in which there are few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors as defined above may not yet exist. Given an open space area that is both large enough to maintain viable populations of species and provide a variety of travel routes (e.g., canyons, ridgelines, trails, riverbeds, and others), wildlife will use these "local" routes while searching for food, water, shelter, and mates and will not need to cross into other large, open space areas. Based on their size, location, vegetative composition, and availability of food, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water, and cover, particularly for small- and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles such as roads and highways, the remaining landscape features or travel routes that connect the larger open space areas can "become" corridors as long as they provide adequate space, cover, food, and water, and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement. When these wildlife movement corridors provide connections between protected open space areas that have no other linkage, then the wildlife movement corridors become locally or even regionally important.

The project site presently provides high quality wildlife habitat that supports numerous travel routes for wildlife movement. In particular, drainages on the project site are natural conduits of wildlife movement whether in a natural setting or surrounded by development. Lyons Canyon Creek and the unnamed drainage in the southeastern corner of the site are tributaries of the South Fork of the Santa Clara River, and both flow beneath I-5 toward the Santa Clara River (Exhibit 4). These watercourses are concrete channels as they pass underneath I-5. They provide connections between the east and west sides of I-5. However, these connections do not likely serve as viable wildlife crossings because of the extended distance beneath I-5 and because they lead to existing development.

Although not on the project site, an important wildlife movement corridor has been identified in East and Rice canyons. This open space area is located approximately three miles south of the project site. Further south, Weldon and Sunshine canyons provide a important wildlife movement corridor near the I-5/State Route-14 junction. These canyons provide important habitat on an east/west axis between the Santa Susana Mountains and to the west and the San Gabriel Mountains and the Angeles National Forest to the east (Gallo 2004). The project site provides important and contiguous open space habitats that support the quality of these nearby regionally important wildlife movement corridors.



Wildlife Movement Corridors and Crossings

Exhibit 4

Lyons Canyon Ranch

BonTerra CONSULTING

R:/Projects/RBF/J171/Ex4_WMS_102804.pdf

D:/Projects/RBF/J171/regionalmap.apr

3.3 SPECIAL STATUS BIOLOGICAL RESOURCES

The following section addresses special status biological resources observed, reported, or having the potential to occur on the project site. These resources include plant and wildlife species that have been afforded special status and/or recognition by federal and state resource agencies, as well as private conservation organizations. In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases from habitat loss. Table 1 and Table 2 provide a summary of special status plant and wildlife species known to occur in the project region. The tables provide information on the status and potential for occurrence of the special status species and definitions for the various status designations. In addition, special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, state, and local government conservation programs. Sources used to determine the special status of biological resources are as follows:

- **Plants** – *Electronic Inventory of Rare and Endangered Vascular Plants of California.* (CNPS 2004); CNDDB (CDFG 2004); various Federal Register notices from the USFWS regarding listing status of plant species.

- **Wildlife** – California Wildlife Habitat Relationships Database System (CDFG 1991); CNDDB (CDFG 2004); various Federal Register notices from the USFWS CDFG 2003) regarding listing status of wildlife species; List of Special Animals (CDFG 2004).

- **Habitats** – CNDDB (CDFG 2004)

3.3.1 DEFINITIONS OF SPECIAL STATUS BIOLOGICAL RESOURCES

Special status habitats are vegetation types, associations, or subassociations that support concentrations of special status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife. Although special status habitats are not afforded legal protection unless they support protected species, potential impacts on them may increase concerns and mitigation suggestions by resources agencies.

A **federally Endangered species** is one facing extinction throughout all, or a significant portion of, its geographic range. A **federally Threatened species** is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally Threatened or Endangered species on a project site generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. Harm in this sense can include any disturbance to habitats used by the species during any portion of its life history.

Proposed species are those officially proposed by the USFWS for addition to the federal Threatened and Endangered species list. Because proposed species may become listed as Threatened or Endangered prior to or during implementation of a proposed development project, they are treated as though they are listed species.

TABLE 1
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT REGION

Species	Status			Likelihood of Occurrence
	USFWS	CDFG	CNPS	
Astragalus brauntonii Braunton's milk-vetch	FE	—	LIST 1B	Not expected to occur; limited suitable habitat; not observed during focused surveys.
Berberis nevinii Nevin's barberry	FE	SE	LIST 1B	Not expected to occur; limited suitable habitat; not observed during focused surveys
Calochortus clavatus var. *clavatus* club-haired mariposa lily	—	—	LIST 4	Intermediates (hybrids) observed during focused surveys (see below).
Calochortus clavatus var. *gracilis* slender mariposa lily	—	—	LIST 1B	Intermediates (hybrids) observed during focused surveys (see below).
Calochortus plummerae Plummer's mariposa lily	—	—	LIST 1B	Observed during focused surveys.
Calystegia peirsonii Peirson's morning-glory	—	—	LIST 4	Observed during focused surveys.
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	FC	SE	LIST 1B	Not expected to occur; limited suitable habitat; not observed during focused surveys.
Deinandra minthornii Santa Susana tarplant	—	SR	LIST 1B	Not expected to occur; lack of suitable habitat; project site located outside geographic range; not observed during focused surveys.
Dodecahema leptoceras slender-horned spineflower	FE	SE	LIST 1B	Not expected to occur; limited suitable habitat; not observed during focused surveys.
Harpagonella palmeri Palmer's grapplinghook	—	—	LIST 4	Not expected to occur; lack of suitable habitat; not observed during focused surveys.
Helianthus nuttallii ssp. *parishii* Los Angeles sunflower	—	—	LIST 1A	Not expected to occur; limited suitable habitat; presumed extinct in California (CNPS 2004); not observed during focused surveys.
Horkelia nuttalii ssp. *parishii* mesa horkelia	—	—	LIST 1B	Not expected to occur; limited suitable habitat; not observed during focused surveys.
Juglans californica Southern California black walnut	—	—	LIST 4	Observed during focused surveys.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	—	—	LIST 1B	Not expected to occur; limited suitable habitat; not observed during focused surveys.
Malacothamnus davidsonii Davidson's bush mallow	—	—	LIST 1B	Not expected to occur; limited suitable habitat; not observed during focused surveys.
Opuntia basilaris var. *brachyclada* short-joint beavertail	—	—	LIST 1B	Not expected to occur; limited suitable habitat; not observed during focused surveys.
Orcuttia californica California Orcutt grass	FE	SE	LIST 1B	Not expected to occur; lack of suitable habitat; not observed during focused surveys.

TABLE 1 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR IN THE PROJECT REGION

Species	Status			Likelihood of Occurrence
	USFWS	CDFG	CNPS	
Senecio aphanactis rayless ragwort	—	—	LIST 2	Not expected to occur; lack of suitable habitat; not observed during focused surveys.

LEGEND

Federal (USFWS)
FE Endangered
FT Threatened
FC Candidate for Listing

State (CDFG)
SE Endangered
ST Threatened
SR Rare
SC Candidate for Listing

California Native Plant Society (CNPS)
List 1A Plants Presumed Extinct in California
List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
List 3 Plants About Which We Need More Information - A Review List
List 4 Plants of Limited Distribution - A Watch List

TABLE 2
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT REGION

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Fish			
Gila orcutti Arroyo chub	—	SSC	Not expected to occur; no suitable habitat.
Catostomus santaanae Santa Ana sucker	FT	SSC	Not expected to occur; no suitable habitat.
Gasterosteus aculeatus williamsoni unarmored threespine stickleback	FE	SE/FP	Not expected to occur; no suitable habitat.
Amphibians			
Taricha torosa torosa coast range newt	—	SSC	Not expected to occur; no suitable habitat.
Spea [Scaphiopus] hammondii western spadefoot	—	SSC	May occur; limited suitable habitat.
Bufo californicus Arroyo southwestern toad	FE	SSC	Not expected to occur; no suitable habitat.
Rana aurora draytonii California red-legged frog	FT	SSC	Not expected to occur; no suitable habitat.
Reptiles			
Emys [Clemmys] marmorata pallida Southwestern pond turtle	—	SSC	May occur; limited suitable habitat.
Anniella pulchra pulchra silvery legless lizard	—	SSC	May occur; limited suitable habitat.
Aspidoscelis [Cnemidophorus] tigris stejnegeri coastal western whiptail	—	SSC	Expected to occur; suitable habitat.
Phrynosoma coronatum blainvillei San Diego horned lizard	—	SSC	Expected to occur; suitable habitat.
Salvadora hexalepis virgultea coast patch-nosed snake	—	SSC	May occur; suitable habitat.
Thamnophis hammondii two-striped garter snake	—	SSC/P	May occur; limited suitable habitat.
Thamnophis sirtalis ssp. south coast garter snake	—	SSC	Not expected to occur; no suitable habitat.

TABLE 2 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT REGION

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Birds			
Elanus leucurus white-tailed kite*	—	FP	May occur; suitable foraging and nesting habitat.
Circus cyaneus northern harrier*	—	SSC	May occur; suitable for foraging, but limited nesting habitat.
Accipiter striatus sharp-shinned hawk*	—	SSC	Expected to occur; suitable habitat for foraging, but not for nesting.
Accipiter cooperii Cooper's hawk*	—	SSC	Expected to occur; suitable habitat for foraging and nesting.
Buteo swainsoni Swainson's hawk*	—	ST	Not expected to occur; no suitable habitat.
Buteo regalis Ferruginous hawk**	—	SSC	Not expected to nest on the project site, but may occur as rare migrant.
Aquila chrysaetos golden eagle*	—[1]	SSC/ FP	May occur; marginal habitat for foraging and no nesting habitat.
Falco sparvarius American kestrel*	—	SSC	Expected to occur; suitable habitat for foraging and nesting.
Falco columbarius merlin**	—	SSC	May occur; suitable habitat for foraging, but no nesting habitat .
Falco mexicanus prairie falcon*	—	SSC	May occur; suitable foraging and nesting habitat on rocky cliff faces.
Coccyzus americanus occidentalis western yellow-billed cuckoo*	C	SE	Not expected to occur; no suitable habitat.
Athene cunicularia western burrowing owl	—	SSC	Not expected to occur; no suitable foraging or nesting habitat.
Asio flammeus short-eared owl	—	SSC	Not expected to occur; no suitable foraging or nesting habitat.
Asio otus long-eared owl*	—	SSC	May occur; suitable foraging and nesting habitat.
Empidonax traillii extimus southwestern willow flycatcher*	FE	SE	Not expected to occur; no suitable habitat.
Lanius ludovicianus loggerhead shrike	—	SSC	May occur; suitable habitat for foraging and nesting onsite.
Vireo bellii pusillus least Bell's vireo*	FE	SE	Not expected to occur; no suitable habitat.
Eremophila alpestris actia California horned lark	—	SSC	May occur; limited suitable habitat.
Campylorhynchus brunneicapillus couesi coastal cactus wren	—	SSC	Not expected to occur; no suitable habitat.
Polioptila californica californica coastal California gnatcatcher	FT	SSC	Not expected to occur; no suitable habitat.
Dendroica petechia brewsteri western yellow warbler*	—	SSC	Not expected to occur; no suitable habitat.
Icteria virens yellow-breasted chat*	—	SSC	Not expected to occur; no suitable habitat.
Agelaius tricolor tricolored blackbird*	—	SSC	Not expected to occur; no suitable habitat.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	—	SSC	Expected to occur; suitable habitat.
Amphispiza belli belli Bell's sage sparrow*	—	SSC	May occur; potentially suitable habitat.
Mammals			
Antrozous pallidus pallid bat	—	SSC	May occur; suitable foraging and roosting habitat exists onsite.
Corynorhinus townsendii pallescens pale big-eared bat	—	SSC	May occur; suitable foraging and roosting habitat exists onsite.

TABLE 2 (Continued)
SPECIAL STATUS WILDLIFE SPECIES KNOWN TO OCCUR IN THE PROJECT REGION

Species	Status		Likelihood of Occurrence
	USFWS	CDFG	
Euderma maculatum spotted bat	—	SSC	Not expected onsite; outside of currently known range.
Eumops perotis western mastiff bat	—	SSC	May occur; potentially suitable foraging and roosting habitat exists onsite.
Macrotus californicus California leaf-nosed bat	—	SSC	May occur; potentially suitable foraging and roosting habitat exists onsite.
Myotis yumanensis Yuma myotis	—	SSC	May occur; potentially suitable habitat.
Lepus californicus bennettii San Diego black-tailed jackrabbit	—	SSC	Not expected to occur; no suitable habitat.
Neotoma lepida intermedia San Diego desert woodrat	—	SSC	May occur; potentially suitable habitat.
Onychomys torridus ramona southern grasshopper mouse	—	SSC	Not expected to occur; no suitable habitat.

LEGEND

Federal (USFWS)		State (CDFG)	
FE	Endangered	E	Endangered
FT	Threatened	T	Threatened
PE	Proposed Endangered	SSC	Species of Special Concern
PT	Proposed Threatened	FP	Fully Protected
C	Candidate Species	P	Protected
		SA	Special Animal

* Nesting habitat protected
** Wintering sites protected

' This species is protected under the federal Bald Eagle Act.

The State of California considers an **Endangered species** as one whose prospects of survival and reproduction are in immediate jeopardy, a **Threatened species** as one present in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management, and a **Rare species** as one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. Rare species applies to California native plants. State Threatened and Endangered species are fully protected against take unless an incidental take permit is obtained from the wildlife agencies.

California Species of Special Concern is an informal designation used by the CDFG for wildlife species with declining populations, limited ranges, and/or continued threats that have made them vulnerable to extinction. The goal of designating these species as special status is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to ensure their long-term viability. Not all Species of Special Concern have declined equally; some species may be just starting to decline, while others may have already reached a point where they meet the criteria for "Threatened" or "Endangered" species under state or federal Endangered Species Acts. These wildlife species are not state candidates at this time, and this designation does not provide legal protection but signifies that these species are recognized as special status by the CDFG.

Species that are **California Fully Protected** and **Protected** include those protected by special legislation for various reasons, such as the mountain lion and white-tailed kite. Fully Protected species may not be taken or possessed at any time. California Protected species include those species that may not be taken or possessed at any time except under special permit from the department issued pursuant to Sections 650 and 670.7 of the California Code of Regulations, or Section 2081 of the Fish and Game Code.

A species that is considered a **Special Animal** is one that is tracked by the CNDDB. Species of **Local Concern** are those that have no official status with the resource agencies, but are being watched because either there is a unique population in the region, or the species is declining in the region.

The CNPS is a local resource conservation organization that has developed an inventory of California's special status plant species (CNPS 2004). This inventory is the summary of information on the distribution, rarity, and endangerment of California's vascular plants. This rare plant inventory is comprised of four lists. CNPS presumes that **List 1A** plant species are extinct in California because they have not been seen in the wild for many years. CNPS considers **List 1B** plants as Rare, Threatened, or Endangered throughout their range. **List 2** plant species are considered Rare, Threatened, or Endangered in California but more common in other states. Plant species for which CNPS needs additional information are included on **List 3**. **List 4** plant species are those of limited distribution in California whose susceptibility to threat appears low at this time.

3.3.2 SPECIAL STATUS VEGETATION TYPES

Coastal Sage Scrub

Coastal sage scrub is located throughout the undeveloped portions of the foothills of Southern California. Coastal sage scrub is considered a special status vegetation type because of it high potential to support Threatened and Endangered wildlife species. Approximately 75.21 acres of coastal sage scrub occur on the project site, prior to the 2003 Simi Fire.

Willow Riparian Woodland

Riparian vegetation typically occurs along intermittent drainages that are subject to seasonal flooding. Resource agencies including the U.S. Army Corps of Engineers (ACOE) and CDFG may take jurisdiction over these areas. The ACOE takes jurisdiction over areas considered "Waters of the U.S." and wetlands. Jurisdictional waters are typically defined by the ordinary high water mark. Wetlands, a subset of jurisdictional waters, are defined as those that possess the following three parameters: (1) hydrology providing permanent or periodic inundation by groundwater or surface water, (2) hydric soils, and (3) hydrophytic vegetation. Jurisdictional limits of CDFG are similar to the jurisdiction of ACOE, but include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. The limits of CDFG jurisdiction are often defined by riparian vegetation or the

ordinary high water mark. CDFG does not take jurisdiction over isolated wetlands, such as vernal pools and seeps. Due to the reduction in range of riparian vegetation throughout Southern California, these areas are considered a special status vegetation type. David Magney Environmental Consulting documented approximately 9.10 acres of ACOE jurisdictional wetlands and 15.51 acres of CDFG jurisdictional areason the project site (DMEC 2004b).

Coast Live Oak Woodland

The habitat provided by oak woodlands is generally of high value to wildlife. In southern California, these woodlands are distributed in the foothills and valleys along the coast from Santa Barbara County south to San Diego County. These woodlands have been greatly reduced through agricultural practices and urbanization. The introduction of domestic grazing animals has also interrupted the slow regeneration of oak woodlands, resulting in retrogressive succession. Well developed oak woodlands regress to open woodlands or savannas and eventually to disturbed grasslands. Due to the reduction in oak woodland habitat, the resource agencies (CDFG and USFWS) consider oak woodland to be an important wildlife resource. Coast live oak woodland covers 63.12 acres on the project site. A tree report has been prepared for the project by David Magney Environmental Consulting. The report describes a distribution of oak tree species onsite, including 2,705 coast live oak, 190 scrub oak (*Quercus berberidifolia*), 28 valley oak (*Quercus lobata*), and 2 blue oak (*Quercus douglasii*), totaling 2,925 oak trees species occurring on the project site (DMEC 2004c).

Southern California Black Walnut Woodland

Southern California black walnut woodland occurs throughout the project site in chaparral. These woodlands match descriptions by Holland (1986) of California walnut woodland; Sawyer and Keeler-Wolf (1995) of California walnut series; and fall within V. Holland's (1988) description of coastal oak woodland. Walnut woodlands are considered special status vegetation types by the CNDDB (CDFG 2004), and the County of Los Angeles (County of Los Angeles 1988, PCR 2000). A total of 2.65 acres of southern California black walnut woodland occur of the project site.

3.3.3 SPECIAL STATUS PLANTS

Two special status plant species were observed on the project site during the 2003 focused surveys conducted by Bowland & Associates: 26 individual slender mariposa lilies and 29 individual Plummer's mariposa lilies.

Four special status plant species were observed on the project site during the 2004 focused surveys conducted by BonTerra Consulting:

- Occasional individuals of southern California black walnut;
- Occasional individuals of Peirson's morning-glory (*Calystegia peirsonii*);
- Approximately 1,100 individual Plummer's mariposa lilies (*Calochortus plummerae*); and

- Approximately 600 individual intermediates (hybrids) of club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*) and slender mariposa lily (*Calochortus clavatus* var. *gracilis*).

Locations of special status mariposa lilies observed on the project site are shown in Exhibit 3. Voucher specimens were collected for the Peirson's morning-glory, Plummer's mariposa lily, and club-haired/slender mariposa lily intermediate, and deposited in a herbarium at the Rancho Santa Ana Botanic Garden to ensure accuracy in identification.

Eighteen special status plant species are known to occur in the project region (see Table 1). A brief description for each of these species is listed below. Specific locations of species occurrences are a compilation of CNDDB (CDFG 2004) records, herbarium research, and knowledge from local experts.

Braunton's Milk-vetch (*Astragalus brauntonii*)

Braunton's milk-vetch is a federally-listed Endangered and CNPS List 1B species. This perennial herb typically blooms between February and July (CNPS 2004). It is found in brushy places and firebreaks below approximately 1,500 feet above msl in chaparral (Munz 1974). It needs fire or other site perturbations for survival (USFWS 1997). This species is often found associated with limestone soil or in down-wash sites associated with chamise, our Lord's candle, tecate cypress (*Cupressus forbesii*), and chaparral beargrass (*Nolina cismontana*) (USFWS 1997). It occurs approximately six miles from the project site near Chatsworth in the Santa Susana Mountains (CDFG 2004). Braunton's milk-vetch was not observed on the project site during focused surveys.

Nevin's Barberry (*Berberis nevinii*)

Nevin's barberry is a federally- and state-listed Endangered and CNPS List 1B species. This perennial evergreen shrub typically blooms between March and April (CNPS 2004). It is found in sandy and gravelly places below approximately 2,000 feet above msl in coastal sage scrub and chaparral (Munz 1974). It occurs approximately five miles from the project site in San Francisquito Canyon, near its confluence with the Santa Clara River (CDFG 2004). Nevin's barberry was not observed on the project site during focused surveys.

Club-haired Mariposa Lily (*Calochortus clavatus* var. *clavatus*)

Club-haired mariposa lily is a CNPS List 4 species. This perennial bulbiferous herb typically blooms between May and June (CNPS 2004). It is found largely on soil of serpentine origin (Munz 1974). This species prefers rocky slopes, chaparral, and open forest below approximately 4,300 feet above msl (Hickman 1993). It is widespread and locally common in open scrub and especially on recent burns; it more or less freely grades into var. *gracilis* (Boyd 1999). Club-haired mariposa lily (in an intermediate form) was observed on the project site during focused surveys.

Slender Mariposa Lily (*Calochortus clavatus* var. *gracilis*)

Slender mariposa lily is a CNPS List 1B species. This perennial bulbiferous herb typically blooms between March and May (CNPS 2004). It is found in canyons below approximately 2,500 feet above msl in chaparral (Munz 1974). All known occurrences are in Los Angeles County, with many locations in the Liebre Mountains. It is widespread, but only infrequently common locally in open scrub and especially on recent burns; it more or less freely grades into var. *clavatus* (Boyd 1999). Slender mariposa lily (in an intermediate form) was observed on the project site during focused surveys.

Plummer's Mariposa Lily (*Calochortus plummerae*)

Plummer's mariposa lily is a CNPS List 1B species. This perennial bulbiferous herb typically blooms between May and July (CNPS 2004). It is found in dry rocky places and in brush below approximately 5,000 feet above msl, in coastal sage scrub and yellow pine forest vegetation communities (Munz 1974). It is locally scarce on rocky slopes and alluvial fans (Boyd 1999). Plummer's mariposa lily was observed on the project site during focused surveys.

Peirson's Morning-glory (*Calystegia peirsonii*)

Peirson's morning-glory is a CNPS List 4 species. This perennial rhizomatous herb typically blooms between May and June (CNPS 2004). It is found on dry slopes from approximately 3,000 to 4,500 feet above msl, in creosote bush scrub and Joshua tree woodland vegetation communities (Munz 1974). This species is a climbing vine also found in openings in coastal sage scrub and chaparral, typically following a burn. Peirson's morning-glory occurs in the San Gabriel and Liebre mountains and in the Antelope Valley. It was known only from a few collections prior to 1970, but it is now believed to be more abundant in coastal sage scrub throughout the Newhall-Mint Canyon region (Boyd 1999). Peirson's morning-glory was observed on the project site during focused surveys.

San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*)

San Fernando Valley spineflower is a federally-listed Candidate, state-listed Endangered, and CNPS List 1B species. This annual herb typically blooms between April and June (CNPS 2004). It is found in dry sandy places below approximately 2,500 feet above msl, mostly in coastal sage scrub (Munz 1974). This species was historically known from the San Fernando Valley, Newhall, Castaic, and Elizabeth Lake areas (Boyd 1999), but was presumed extinct until it was rediscovered at Ahmanson Ranch in Ventura County. It occurs approximately four miles from the project site at the Magic Mountain Entertainment Site, south of the Santa Clara River and west of I-5 (CDFG 2004). San Fernando Valley spineflower was not observed on the project site during focused surveys.

Santa Susana Tarplant (Deinandra [Hemizonia] minthornii)

Santa Susana tarplant is a state-listed Rare and CNPS List 1B species. This perennial deciduous shrub typically blooms between July and November (CNPS 2004). It is found in chaparral from approximately 1,000 to 1,600 feet above msl in the Santa Susana and Santa Monica mountains (Hickman 1993). It occurs approximately eight miles from the project site, about one mile north of the Santa Susana Pass (CDFG 2004). Santa Susana tarplant was not observed on the project site during focused surveys and therefore, not expected to occur on the project site.

Slender-horned Spineflower (*Dodecahema leptoceras*)

Slender-horned spineflower is a federally-listed Endangered, state-listed Endangered, and CNPS List 1B species. This annual herb typically blooms between April and June (CNPS 2004). It is found in alluvial sand in coastal scrub from approximately 700 to 2,300 feet above msl (Hickman 1993). This species typically occurs in mature alluvial fan sage scrub, in sandy to gravelly soil, in small isolated areas lacking any evidence of surface disturbance. It was once collected from near Newhall, where it is now presumed extirpated. An extant population near the confluence of Bee Canyon with Soledad Canyon, approximately 15 miles from the project site, has been reported but not vouchered (Boyd 1999). Slender-horned spineflower was not observed on the project site during focused surveys.

Palmer's Grapplinghook (*Harpagonella palmeri*)

Palmer's grapplinghook is a CNPS List 4 species. This annual herb typically blooms between March and May (CNPS 2004). It is found on dry slopes and mesas below approximately 1,500 feet above msl in chaparral (Munz 1974). This species is uncommon and very local, occurring in open clay soil in Plum Canyon, approximately seven miles from the project site, and historically near Saugus (Boyd 1999). Palmer's grapplinghook was not observed on the project site during focused surveys.

Los Angeles Sunflower (*Helianthus nuttallii* ssp. *parishii*)

Los Angeles sunflower is a CNPS List 1A species, which is presumed extinct in California. This perennial rhizomatous herb typically bloomed between August and October (CNPS 2004). It occurred on wet ground from approximately 1,000 to 1,500 feet above msl in Los Angeles, San Bernardino, and Orange counties (Munz 1974). It was last seen in 1937 (Hickman 1993). A recent occurrence was reported in 2002 approximately five miles from the project site, near the confluence of Santa Clara River and Castaic Creek; however, this record is currently being disputed (CDFG 2004). Los Angeles sunflower was not observed on the project site during focused surveys.

Mesa Horkelia (*Horkelia cuneata* ssp. *puberula*)

Mesa horkelia is a CNPS List 1B species. This perennial herb typically blooms between February and September (CNPS 2004). It is found in dry, sandy, coastal chaparral from approximately 200 to 2,300 feet above msl, especially along the foothill edge of the Los Angeles Basin (Hickman 1993). This species occurs away from the immediate coast from San Luis Obispo to San Diego counties, and rarely inland to San Bernardino County. Mesa horkelia was not observed on the project site during focused surveys.

Southern California Black Walnut (*Juglans californica*)

Southern California black walnut is a CNPS List 4 species. This perennial deciduous tree typically blooms between March and May (CNPS 2004). It is found on slopes, canyons and valleys from approximately 200 to 3,000 feet above msl (Hickman 1993). This species occurs in Orange County, and from western cismontane San Bernardino County to Ventura County (Munz 1974). Southern California black walnut was observed on the project site during focused surveys.

Robinson's Pepper-grass (*Lepidium virginicum* var. *robinsonii*)

Robinson's pepper-grass is a CNPS List 1B species. This annual herb typically blooms between January and July (CNPS 2004). It is found in coastal sage scrub and chaparral from Los Angeles County south to the Channel Islands (Munz 1974). It occurs on dry soils in shrublands below approximately 1,600 feet above msl (Hickman 1993). It occurs more than 30 miles from the project site in the San Gabriel Mountains between Santa Anita Canyon and Sierra Madre (CDFG 2004). Robinson's pepper-grass was not observed on the project site during focused surveys.

Davidson's Bush Mallow (*Malacothamnus davidsonii*)

Davidson's bush mallow is a CNPS List 1B species. This perennial deciduous shrub typically blooms between June and January (CNPS 2004). It is found in sandy washes and flats in coastal sage scrub (Munz 1974). It occurs between approximately 800 and 2,300 feet above msl in the eastern San Fernando Valley of Los Angeles County, and in Monterey and San Luis Obispo counties (Hickman 1993). It occurs approximately seven miles from the project site, north of San Fernando and Highway 210 (CDFG 2004). Davidson's bush mallow was not observed on the project site during focused surveys.

Short-joint Beavertail (*Opuntia basilaris* var. *brachyclada*)

Short-joint beavertail is a CNPS List 1B species. This perennial stem succulent typically blooms between April and June (CNPS 2004). It is found on dry slopes between approximately 4,000 and 7,500 feet above msl in Joshua tree woodlands; it is known from the desert slopes of the San Gabriel, San Bernardino, and Providence mountains (Munz 1974). Its stems are conspicuously round or nearly round in cross-section (rather than the broad, flattened stems of

other beavertail varieties). It is also found in chaparral (Hickman 1993). It occurs approximately four miles from the project site in Quigley Canyon, east of Newhall (CDFG 2004). Short-joint beavertail was not observed on the project site during focused surveys.

California Orcutt Grass (*Orcuttia californica*)

California Orcutt grass is a federally- and state-listed Endangered, and CNPS List 1B species. This annual herb typically blooms between April and August (CNPS 2004). It is found in vernal pools below approximately 2,100 feet above msl in Los Angeles, Riverside, and San Diego counties (Hickman 1993). It is locally common in vernal pools on Cruzan Mesa and in Plum Canyon, the only known extant populations in Los Angeles County (Boyd 1999). Plum Canyon is approximately seven miles from the project site. California Orcutt grass was not observed on the project site during focused surveys.

Rayless Ragwort (*Senecio aphanactis*)

Rayless ragwort is a CNPS List 2 species. This annual herb typically blooms between January and April (CNPS 2004). It is found in drying alkaline flats below approximately 1,300 feet above msl (Hickman 1993). It occurs near the coast in dry open places in coastal sage scrub and chaparral, from San Diego County to central California (Munz 1974). A historic occurrence recorded in 1901 exists within approximately five miles of the project site (CDFG 2004). Rayless ragwort was not observed on the project site during focused surveys.

3.3.4 SPECIAL STATUS WILDLIFE

Forty-eight special status wildlife species are known to occur in the project region. A brief description of these special status wildlife species and their potential to occur on the project site are discussed below.

FISH

Arroyo Chub (*Gila orcutti*)

Arroyo chub is a California Species of Special Concern. This species feeds on algae and prefers warm water temperatures and pool habitats with sand and mud bottoms. The arroyo chub is now common at only four of its native locations: Santa Margarita River in South Riverside County, De Luz Creek in San Diego County, Trabuco and San Juan Creeks in Orange County, and Malibu Creek in Los Angeles County (Swift et al. 1993). The chub has also been introduced into several rivers and streams in southern California. Lyons Canyon Creek and the unnamed drainage at the southeastern corner of the project site do not provide suitable habitat for this species. Therefore, the arroyo chub is not expected to occur on the project site.

Santa Ana Sucker (*Catostomus santaannae*)

Santa Ana sucker is a federally-listed Threatened species and a California Species of Special Concern. The Santa Ana sucker prefers clear, cool, rocky, and gravelly streams where it feeds

on algae, diatoms, detritus, and small insect larvae. This species occurs in the Los Angeles, San Gabriel, and Santa Ana River systems and an introduced population occurs in the Santa Clara River. Lyons Canyon Creek and the unnamed drainage at the southeastern corner of the project site do not provide suitable habitat for the Santa Ana sucker. Therefore, the Santa Ana sucker is not expected to occur on the project site.

Unarmored Threespine Stickleback (*Gasterosteus aculeatus williamsoni*)

Unarmored threespine stickleback is a federally- and state-listed Endangered species. This species is also California Fully Protected. The historic range of the unarmored threespine stickleback includes all of the major drainages of the San Gabriel Mountains, which include the Los Angeles, San Gabriel and Santa Ana rivers. The range is now restricted to the San Francisquito Canyon, Bouquet Canyon, and Santa Clara River drainages. Its regional decline is attributed to the channelization of watershed for flood control and development, and disruption of drainages by urbanization. Lyons Canyon Creek and the unnamed drainage at the southeastern corner of the project site do not provide suitable habitat for this species. Therefore, the unarmored threespine stickleback is not expected to occur on the project site.

AMPHIBIANS

Coast Range Newt (*Taricha torosa torosa*)

Coast Range newt is a California Species of Special Concern. This newt occurs in the mountain ranges along the coast of California from Mendocino County south to San Diego County (Stebbins 2003, Zeiner et al. 1988). It occurs in terrestrial habitats including grasslands, chaparral, coastal sage scrub, and woodlands but requires aquatic habitats such as ponds, reservoirs, and slow-moving streams for breeding (Zeiner et al. 1988, Jennings and Hayes 1994). This is a conspicuous salamander that can be active during the day in addition to night. Its skin secretions make it toxic to many potential predators. The nearest known populations to the study area are in the San Gabriel Mountains (Jennings and Hayes 1994). Lyons Canyon Creek and the unnamed drainage at the southeastern corner of the project site project site do not provide suitable habitat for this species. Therefore, the Coast Range newt is not expected to occur on the project site.

Western Spadefoot (Spea [Scaphiopus] hammondii)

Western spadefoot is a California Species of Special Concern. The California range of this toad is the Central Valley and adjacent foothills, and the Coast Ranges from Point Conception, Santa Barbara County south to San Diego County (Stebbins 2003, Zeiner et al. 1988). This is primarily a lowland species and is found in washes, river flood plains, alluvial fans, playas, and alkali flats (Stebbins 2003). It primarily inhabits grasslands, but does occur in other sparsely vegetated habitats (Zeiner et al. 1988). This species is rarely observed outside of the breeding season. They breed in vernal pools and other ponds. The western spadefoot has declined substantially throughout its range; for example, greater than 80 percent of formerly occupied western

spadefoot habitat from the Santa Clara River Valley, Los Angeles and Ventura counties southward has been lost (Jennings and Hayes 1994). The project site provides limited suitable habitat for the western spadefoot; therefore, this species may occur onsite.

Arroyo Southwestern Toad *(Bufo californicus)*

Arroyo toad is a federally-listed Endangered species and a California Species of Special Concern. This toad only occurs in streams of southwestern California and northwestern Baja California (USFWS 1994). In California, it primarily occurs along the Coast Ranges from San Luis Obispo County south San Diego County, but also occurs at a few locations on the western edge of the desert (Jennings and Hayes, USFWS 1994). The arroyo toad is generally found in semi-arid regions near washes or intermittent streams (Zeiner et al. 1988); however, this species has highly specialized habitat requirements such as breeding pools within 330 feet of juvenile and adult habitat, which consists of shoreline with stable, sandy terraces (Jennings and Hayes 1994). A habitat assessment was performed on March 30, 2004 by BonTerra Consulting Senior Scientist Mike Robson and it was determined that the project site does not provide suitable habitat for the arroyo toad. Therefore, this species is not expected to occur on the project site.

On February 7, 2001, the USFWS published a final designation of 182,360.0 acres of land as critical habitat for the arroyo southwestern toad (USFWS February 7, 2001). These lands encompass portions of Monterey, Santa Barbara, Ventura, Los Angeles, San Bernardino, Orange, Riverside, and San Diego counties, California. The project site is outside of the critical habitat area designated for this species.

California Red-legged Frog (*Rana aurora draytonii*)

California red-legged frog is a federally-listed Threatened species and a California Species of Special Concern. This frog has been extirpated from approximately 70 percent of its historic range and now primarily occurs only in wetlands and streams of central California (USFWS 2000). This species prefers areas with deep ponds in areas of streams that have slow water flow with emergent vegetation at the edge of the banks (Jennings and Hayes 1994). Adults feed on aquatic and terrestrial invertebrates, crustaceans, snails, worms, fish, tadpoles and smaller frogs (Zeiner et al. 1988). The nearest known population of the California red-legged frog to the project site is in the Piru Creek drainage (Jennings and Hayes 1994, USFWS 2000). No suitable water sources for this species occur on the project site; therefore the California red-legged frog is not expected to occur onsite.

REPTILES

Southwestern Pond Turtle (*Clemmys marmorata pallida*)

Southwestern pond turtle is a California Species of Special Concern. This species occurs primarily in freshwater rivers, streams, lakes, ponds, vernal pools, and seasonal wetlands requiring water depths in excess of six feet and basking sites such as logs, banks, or other

suitable areas above water level. The southwestern pond turtle occurs from Monterey Bay south through the Coast Ranges to northern Baja California (Holland 1991). The current range is similar to the historic range, but populations have become fragmented by agriculture and urban development. The project site provides limited suitable habitat for this species; therefore, the southwestern pond may occur onsite.

Silvery Legless Lizard (*Anniella pulchra pulchra*)

Silvery legless lizard is a California Species of Special Concern. It is a small, secretive lizard that spends most of its life beneath the soil, under stones, logs, debris, or in leaf litter. The silvery legless lizard inhabits areas with moist, sandy soil including dry washes, woodlands, riparian, and scrub vegetation types at elevations ranging from sea level to about 5,000 feet above msl within the Coast, Transverse, and Peninsular ranges in California and northwestern Baja California (Stebbins 2003). Prior to the 2003 Simi Fire, dense, moist, oak leaf litter and caked leaf mold beneath coast live oak trees adjacent to the Lyons Canyon Creek may have provided high value habitat for this species; however, the flames and intense heat from the fire would have destroyed much of the habitat. Limited suitable habitat for the silvery legless lizard occurs on the project site; therefore, this species may occur onsite.

Coastal Western Whiptail (*Aspidoscelis [Cnemidophorus] tigris stejnegeri*)

Coastal western whiptail is a Special Animal. This whiptail occurs in the coastal region of southern California south to central Baja California, Mexico (Stebbins 2003). This lizard is a moderately large, slender lizard that is most common in and around dense vegetation especially where the substrate is sandy or gravelly (Zeiner et al. 1988). This species' prey includes a wide variety of terrestrial insects such as grasshoppers, beetles, ants, termites, insect larvae, and spiders (Zeiner et al. 1988). Along the coast of southern California, this species has apparently declined due to loss of habitat. The project site provides suitable habitat for this species; therefore the coastal western whiptail is expected to occur onsite.

San Diego Horned Lizard (*Phrynosoma coronatum blainvillei*)

San Diego horned lizard is California Species of Special Concern. It is a small, spiny, somewhat rounded lizard that occurs primarily in open or sparse scrub and chaparral vegetation types. This species prefers loose, friable soil for burrowing. Three factors have contributed to its decline: loss of habitat, overcollecting, and the introduction of exotic ants. In some places, especially adjacent to urban areas, the introduced ants have displaced the native species upon which the lizard feeds (Hix 1990). The San Diego horned lizard occurs in the Transverse Ranges in Kern, Los Angeles, Santa Barbara, and Ventura counties southward into the Peninsular Ranges of southern California to Baja California (Jennings and Hays 1994). The project site provides suitable habitat for this species; therefore the San Diego horned lizard species is expected to occur onsite.

Coast Patch-nosed Snake (Salvadora hexalepis virgultea)

Coast patch-nosed snake is a California Species of Special Concern. This snake occurs in the coastal region of southern California and northwestern Baja California, Mexico (Stebbins 2003). Its California range is from San Luis Obispo County and Kern County south to San Diego County (Zeiner et al. 1988). This moderate-sized, active snake inhabits open sandy areas with rocky outcrops within scrub, grassland, and woodland vegetation types. It occurs from sea level to about 7,000 feet in elevation (Stebbins 2003). The nearest known populations of the coast patch-nosed snake to the project site are in the watershed of the Santa Clara River (Jennings and Hayes 1994). The project site provides suitable habitat for this species; therefore, the coast patch-nosed snake may occur onsite.

Two-striped Garter Snake (*Thamnophis hammondii*)

Two-striped garter snake is a California Species of Special Concern. This snake occurs in the coastal region of California from Monterey County south to northwest Baja California (Jennings and Hayes 1994). This highly aquatic snake occurs in freshwater marsh and riparian habitats with perennial water. Prey for this snake primarily consists of small fishes, frogs, and tadpoles. The range of the two-striped garter snake is along the coast from central California to northwest Baja California, Mexico (Stebbins 2003). The nearest known populations of the two-striped garter snake to the project site are in the watershed of the Santa Clara River (Jennings and Hayes 1994). The project site provides limited suitable habitat for the two-striped garter snake; therefore, it may occur onsite.

South Coast Garter Snake (*Thamnophis sirtalis* ssp.)

The south coast garter snake is a California Species of Special Concern. This snake occurs in southwestern California from the Santa Clara River Valley, Ventura County, to the San Pasqual in San Diego County (Jennings and Hayes 1994). Although poorly known, habitat for the south coast garter snake appears to be marsh and upland habitats near permanent water sources with riparian vegetation (Jennings and Hayes 1994). The nearest known populations of the south coast garter snake to the project site are in the Santa Clara River Valley (Jennings and Hayes 1994). The project site provides no suitable habitat for this species; therefore, the south coast garter snake is not expected to occur onsite.

BIRDS

White-tailed Kite (*Elanus leucurus*)

White-tailed kite is a California Fully Protected species. This raptor is an uncommon to locally fairly common year-round resident on the coast of southern California (Garrett and Dunn 1981). Many populations in North America have declined in the 1980s and 1990s including southern California (Dunk 1995). The white-tailed kite requires open habitats, such as grasslands, marshlands, and agricultural fields with nearby trees for perching and nesting. This graceful

raptor preys primarily on small rodents (Kaufman 1996). The project site provides suitable foraging and breeding habitat for this species; therefore, the white-tailed kite may occur onsite.

Northern Harrier (*Circus cyaneus*)

Northern harrier is a California Species of Special Concern. This raptor is a fairly common winter resident in southern California but a very scarce and local breeder (Garrett and Dunn 1981). The northern harrier requires open habitats such as grasslands, marshlands, and agricultural fields. This species nests on the ground in a variety of wetland and upland habitats (MacWhirter and Bildstein 1996). This distinctive raptor preys primarily on small birds and mammals (Kaufman 1996). The project site provides suitable foraging habitat and a limited amount of breeding habitat for this species; therefore, the northern harrier may occur onsite.

Sharp-shinned Hawk (*Accipiter striatus*)

Sharp-shinned hawk is a California Species of Special Concern. This raptor is a fairly common winter resident in southern California and a rare summer resident in the mountains (Garrett and Dunn 1981). The sharp-shinned hawk prefers woodland habitats but can also be found in virtually any habitat as it passes through the area during the spring and fall migration. Although this small hawk will prey on mammals and even insects, its primary prey consists of small birds (Bildstein and Meyer 2000). The project site provides suitable foraging habitat, but no suitable nesting habitat. Therefore, the sharp-shinned hawk is expected to occur on the project site.

Cooper's Hawk (*Accipiter cooperii*)

Cooper's hawk is a California Species of Special Concern. This raptor is an uncommon year-round resident in southern California (Garrett and Dunn 1981). The Cooper's hawk prefers woodland habitats but can also be found in virtually any habitat during migration. Typical breeding habitat in southern California consists of riparian and oak woodlands, but it also nests in ornamental woodlands provided by parks and other urban habitats. This medium-sized hawk preys primarily on medium-sized birds and mammals (Rosenfield and Bielefeldt 1993). The project site provides suitable foraging, as well as nesting habitat for the Cooper's hawk. Therefore, the Cooper's hawk is expected to occur onsite.

Swainson's Hawk (*Buteo swainsoni*)

Swainson's hawk is a state-listed Threatened species. This raptor is a very rare migrant along the coast of southern California (Garrett and Dunn 1981). The Swainson's hawk formerly bred along the coast in southern California, but breeding is now mostly limited to the Sacramento and San Joaquin valleys, extreme northeast California, and Mono and Inyo counties (England et al. 1997). Typical breeding habitat consists of open habitat such as grasslands and agricultural fields with scattered groves of trees. Prey consists of small mammals and reptiles in early summer and large insects at other seasons (Kaufman 1996). The project site does not provide suitable habitat for the Swainson's hawk; therefore, this species is not expected to occur onsite.

Ferruginous Hawk (*Buteo regalis*)

Ferruginous hawk is a California Species of Special Concern. This raptor only occurs as a winter resident in California (Bechard and Schmutz 1995). Along the coast of southern California, it is rare to uncommon during the winter season (Garrett and Dunn 1981). The ferruginous hawk occupies open, dry habitats such as grasslands, shrublands, rangelands, and, in winter, plowed agricultural fields. This relatively large raptor preys primarily on small to medium-sized mammals (Kaufman 1996). The project site provides a limited amount of potentially suitable foraging but no suitable breeding habitat for the ferruginous hawk. Therefore, the Ferruginous hawk may occur on the project site only as a rare winter migrant to the region.

Golden Eagle (*Aquila chrysaetos*)

Golden eagle is a California Species of Special Concern, a Fully Protected species, and is also protected by the federal Bald Eagle Act. This raptor is an uncommon year-round resident in southern California (Garrett and Dunn 1981). The golden eagle prefers open habitats such as grasslands, rangelands, and agricultural fields. It typically nests on rocky cliff ledges or trees, but also rarely on the ground (Kaufman 1996, Baicich and Harrison 1997). This large raptor preys primarily on small to medium-sized mammals, but will take on occasion larger mammals such as foxes (*Urocyon cinereoargenteus*) and young deer (Kaufman 1996). The project site provides marginally suitable habitat for foraging and no nesting habitat for the golden eagle; therefore, this species may occur onsite.

Merlin (*Falco columbarius*)

Merlin is a California Species of Special Concern. In California, this raptor occurs only in migration and as a winter resident (Grinnell and Miller 1944, Sodhi et al. 1993). The merlin is an uncommon fall migrant and rare winter resident in Southern California (Garrett and Dunn 1981). It prefers open to semi-open habitat for breeding and foraging (Sodhi et al. 1993). This small raptor preys primarily on small birds (Kaufman 1996). The project site provides suitable habitat for foraging and no nesting habitat for the merlin; therefore, this species may occur onsite.

Prairie Falcon (*Falco mexicanus*)

Prairie falcon is a California Species of Special Concern. This raptor is an uncommon year-round resident in the interior of Southern California (Garrett and Dunn 1981). The prairie falcon is an increasingly scarce winter resident and very rare summer resident along the coast of Southern California (Unitt 1984, Lehman 1994, Hamilton and Willick 1996). This falcon prefers dry open habitats such as grasslands, rangelands, and agricultural fields. This medium-sized raptor preys primarily on small birds and mammals (Kaufman 1996). The project site provides suitable foraging habitat, as well as potential nesting habitat, for the prairie falcon on some of the more inaccessible rocky cliff faces. The prairie falcon may occur onsite.

Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)

Western yellow-billed cuckoo is a state-listed Endangered species and a federal candidate species for listing. Formerly a rare summer resident, this species is now extirpated from much of Southern California. Breeding yellow-billed cuckoos are restricted to extensive deciduous riparian thickets or forest with dense, low-level or understory foliage that occur along slow-moving watercourses, backwaters, or seeps. Willows (*Salix* spp.) are almost always a dominant component of western yellow-billed cuckoo nesting habitat. The western yellow-billed cuckoo is not expected to occur on the project site due to a lack of suitable habitat.

Western Burrowing Owl (*Athene cunicularia hypugaea*)

Western burrowing owl is a California Species of Special Concern. The California Department of Fish and Game is currently reviewing a petition to list the western burrowing owl as a state Threatened or Endangered species candidate. Western burrowing owls breed and forage in grasslands and prefer flat to low rolling hills in treeless terrain. They are small owls that nest in burrows, typically in open habitats most often along banks and roadsides. The burrowing owl is a widespread species throughout the western United States, but has declined in many other areas due to habitat modification, poisoning of its prey items, and introduced nest predators. The project site has habitat that is not appropriate for foraging, or occupation by this species; therefore, the western burrowing owl is not expected to occur on the project site.

Short-eared Owl (*Asio flammeus*)

Short-eared owl is a California Species of Special Concern. This owl is an uncommon and local winter resident to coastal habitats of Southern California (Garrett and Dunn 1981). In Santa Barbara County, this species is considered to be a rare fall transient and winter resident in areas with extensive grassland and marsh habitats, and less so in agricultural habitats (Lehman 1994). This owl hunts day or night in open habitats such as marshes, grassland, and tundra (Holt and Leasure 1993). The project site does not provide suitable foraging or nesting habitat for the short-eared owl and it is not expected to occur on the project site.

Long-eared Owl (*Asio otus*)

Long-eared owl is a California Species of Special Concern. This species is an uncommon resident in the deserts, and is quite rare coastally (Garrett and Dunn 1981). This species nests in oak and willow woodlands and forages in scrub and grassland vegetation types. Long-eared owls have declined throughout California, but the most pronounced reductions have occurred in the southwestern part of the state where a minimum 55 percent decline has been documented (Bloom 1996). The project site provides suitable foraging and nesting habitat for this species; therefore, the long-eared owl may occur on the project site.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

Southwestern willow flycatcher is a federally- and state-listed Endangered species. This subspecies was once considered a common breeder in coastal Southern California. However, this subspecies has declined drastically due to a loss of breeding habitat and nest parasitism by brown-headed cowbirds (*Molothrus ater*). This subspecies breeds in Southern California, Southern Nevada, Southern Utah, Arizona, New Mexico, and western Texas (USFWS February 27, 1995). This species occurs in riparian habitats along rivers, streams, or other wetlands where dense growths of willows (*Salix* sp.), baccharis (*Baccharis* sp.), arrowweed (*Pluchea* sp.), tamarisk (*Tamarix* sp.), or other plants are present, often with a scattered overstory of cottonwood (*Populus* sp.) (USFWS February 27, 1995). The southwestern willow flycatcher is not expected to occur on the project site due to a lack of suitable habitat following the 2003 Simi Fire. However, if suitable riparian habitat recovers on the project site, focused surveys for the southwestern willow flycatcher would be recommended.

On October 12, 2004, USFWS published a Final Rule designating critical habitat for this species. Approximately 99.8 river miles in Kern, Riverside, San Bernardino, and San Diego counties, California were designated for the southwestern willow flycatcher (USFWS July 22, 1997). The project site is not located within the designated critical habitat area for southwestern willow flycatcher.

Loggerhead Shrike (*Lanius ludovicianus*)

Loggerhead shrike is a California Species of Special Concern. This shrike was widely distributed across North America but has declined throughout most of its range in recent decades (Yosef 1996). It was considered to be a fairly common year-round resident in southern California (Garrett and Dunn 1981), but has recently shown declines in its California population (Small 1994, Hamilton and Willick 1996). This species inhabits grasslands and other open habitats (Yosef 1996). They can often be found perched on fences and posts from which prey items (large insects, lizards, and even small birds and mammals) can be seen hanging from a sharp object such as a barb-wired fence. This is the source of one of their common names, the "butcherbird." The project site provides suitable foraging and nesting habitat for this species; therefore, the loggerhead shrike may occur on the project site.

Least Bell's Vireo (*Vireo bellii pusillus*)

Least Bell's vireo is a federally- and state-listed Endangered species. This vireo was formerly considered to be a common breeder in riparian habitats throughout the Central Valley and other low elevation river systems in California and Baja California, Mexico (Franzreb 1989). It is now considered to be a rare and local summer resident (Garrett and Dunn 1981), although there have been some regional population increases (Hamilton and Willick 1996). The least Bell's vireo breeds primarily in riparian habitats dominated by willows (*Salix* spp.) with dense understory vegetation (USFWS 1986). A dense shrub layer two to ten feet above ground is the

most important habitat characteristic for this species (Goldwasser 1981, Franzreb 1989). Prior to the 2003 Simi Fire, the project site provided potentially suitable habitat for this species. The Simi Fire burned any suitable riparian habitat for the least Bell's vireo; therefore, this species is not expected to occur on the project site due to lack of suitable habitat. However, if suitable riparian habitat recovers on the project site, focused surveys for the least Bell's vireo would be recommended.

On February 2, 1994, the USFWS published a final critical habitat for the least Bell's vireo, designating approximately 37,560 acres of land in Santa Barbra, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego counties, California (USFWS February 2, 1994). The project site is not located within the designated critical habitat area for the least Bell's vireo.

California Horned Lark (*Eremophila alpestris actia*)

California horned lark is a California Species of Special Concern. The California horned lark is found along the coast of northern California, in the San Joaquin Valley, in the coast ranges south of San Francisco Bay, and in Southern California west of the deserts. In Southern California, this subspecies is a fairly common breeding resident in grasslands and dry, open habitats. During the winter season, other subspecies occur in Southern California and the horned lark, including all subspecies, can be locally common in the region. The project site provides limited suitable habitat for this species; therefore, the California horned lark may occur on the project site.

Coastal Cactus Wren (*Campylorhynchus brunneicapillus couesi*)

Coastal cactus wren is a California Species of Special Concern. This wren is a very local resident along the coast of southern California from San Diego County north to Ventura County (Garrett and Dunn 1981). Ventura populations are known from Point Mugu, Camarillo, and Simi Valley, and, at least, formerly north to Santa Paula and Sespe (Garrett and Dunn 1981). Except for the Banning Pass west of Palm Springs, the coastal population of cactus wrens appear to be isolated from interior populations. Rea and Weaver (1990) proposed that the cactus wrens from San Diego and southern Orange counties form a distinct subspecies, the San Diego cactus wren (*C. b. sandiegensis*); however, the taxonomic status of cactus wrens in the southwestern U.S. is still considered uncertain (Proudfoot et al. 2000). The coastal cactus wren inhabits coastal sage scrub and alluvial sage scrub habitats that have sufficient amounts of prickly pear cactus (*Opuntia littoralis*) and/or cholla (*Opuntia* sp.). The project site does not provide suitable habitat for this species; therefore, the coastal cactus wren is not expected to occur onsite.

Coastal California Gnatcatcher (*Polioptila californica californica*)

Coastal California gnatcatcher is a federally-listed Threatened species and a California Species of Special Concern. This species occurs in northwestern Baja California's arid coastal regions, but is extremely localized in the United States where it predominantly occurs in coastal regions of highly urbanized Los Angeles, Orange, Riverside, and San Diego counties (Atwood 1992). In

California, this species is an obligate resident of several distinct subassociations of the coastal sage scrub vegetation type. Brood parasitism by brown-headed cowbirds and loss of habitat to urban development have been cited as causes of the coastal California gnatcatcher population decline (Unitt 1984; Atwood 1990). Prior to the 2003 Simi Fire, the project site provided potentially suitable habitat for this species within and adjacent to the coastal sage scrub habitats. The Simi Fire burned any suitable coastal sage scrub habitat for the coastal California gnatcatcher; therefore, this bird species is not expected to occur on the project site due to lack of suitable habitat. If suitable coastal sage scrub recovers on the project site, focused surveys for the coastal California gnatcatcher would be recommended.

On October 24, 2000, the USFWS published a Final Rule to designate critical habitat for the coastal California gnatcatcher (USFWS October 24, 2000). On April 24, 2003, the USFWS published a Proposed Rule re-evaluating the boundaries of coastal California gnatcatcher critical habitat; they propose to designate 495,795 acres of land as critical habitat for the coastal California gnatcatcher (USFWS April 24, 2003). These lands encompass portions of Los Angeles, San Bernardino, Orange, Riverside, and San Diego counties in California. The project site is not located within either the designated or proposed critical habitat areas for the coastal California gnatcatcher.

Western Yellow Warbler (*Dendroica petechia brewsteri*)

Western yellow-warbler is a California Species of Special Concern. The subspecies of yellow warbler that breeds in Southern California is the western yellow warbler (*D.p. brewsteri*) (Dunn and Garrett 1997). This subspecies occurs in coastal areas from northwestern Washington south to western Baja California (Dunn and Garrett 1997). In Southern California, yellow warblers breed locally in riparian woodlands, but during migration they can forage in a variety of different habitat types. The western yellow-warbler is not expected to occur on the project site due to lack of suitable habitat.

Yellow-breasted Chat (*Icteria virens*)

Yellow-breasted chat is a California Species of Special Concern. This species occurs as an uncommon and local summer resident in Southern California along the coast and in the deserts (Garret and Dunn 1981). This large warbler was once a fairly common summer resident in riparian woodlands throughout California, but it is now much reduced in numbers, especially in Southern California (Remsen 1978). For nesting, this species requires dense, brushy tangles near water and riparian woodlands supporting a thick understory. The yellow-breasted is not expected to occur on the project site due to lack of suitable habitat.

Tricolored Blackbird (*Agelaius tricolor*)

Tricolored blackbird is a California Species of Special Concern. These colonially-nesting birds prefer to breed in marsh vegetation of bulrushes (*Scirpus* sp.) and cattails (*Typha* sp.) and have also been recorded nesting in willows (*Salix* spp.), blackberries (*Rubus ursinus*), and mustard

(*Brassica* sp.) (Beedy et al. 1991). During winter months, they are often found foraging in wet pastures, agricultural fields, and seasonal wetlands. Tricolored blackbirds are nomadic, wandering during the non-breeding season and occupying colony sites intermittently (Unitt 1984). The tricolored blackbird is not expected to occur on the project site due to lack of suitable habitat.

Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)

Southern California rufous-crowned sparrow is a California Species of Special Concern. In coastal Southern California, Southern California rufous-crowned sparrows are considered fairly common in scrub vegetation types and other habitats vegetated with grasses and widely-spaced low shrubs. They also prefer slopes with rock outcroppings. This species is present throughout the year in Southern California. The project site provides suitable habitat for the Southern California rufous-crowned sparrow; therefore, it may occur onsite.

Bell's Sage Sparrow (*Amphispiza belli belli*)

Bell's sage sparrow is a California Species of Special Concern. This coastal subspecies is an uncommon to fairly common local resident in the interior foothills of coastal Southern California. The Bell's sage sparrow breeds in low, dense, chamise chaparral and in dry scrub vegetation types, often with stands of cactus (*Opuntia* sp.) (Garrett and Dunn 1981). The project site provides potentially suitable habitat for this species; therefore, the Bell's sage sparrow may occur onsite.

MAMMALS

Pallid Bat (*Antrozous pallidus*)

Pallid bat is a California Species of Special Concern. The pallid bat is considered to be a locally common year-round resident at low elevations throughout most of California (Zeiner et al. 1990). It occurs in a wide variety of habitats including grasslands, shrublands, and woodlands, but is most common in open habitats with rocky areas for roosting (Zeiner et al. 1990). The foraging behavior of this large bat is unique in that it forages primarily on the ground where it takes large insects such as flightless beetles, crickets, scorpions, and grasshoppers (Whitaker 1980). Roosting habitat consists of caves, crevices, mines, and occasionally hollow trees and buildings (Whitaker 1980, Zeiner et al. 1990). The project site provides suitable foraging and roosting habitat for the pallid bat and it may occur onsite.

Pale Big-eared Bat (*Corynorhinus townsendii pallescens*)

Pale big-eared bat is a California Species of Special Concern. The pale big-eared bat is one of two subspecies of the Townsend's big-eared bat that occurs throughout most of California (Williams 1986). The Townsend's big-eared bat, including both subspecies, is considered to be an uncommon year-round resident throughout much of California (Zeiner et al. 1990). The pale

big-eared bat occurs in the southern part of the state and occupies a variety of habitats including oak woodlands, arid deserts, grasslands, and high-elevation forests and meadows (Hall 1981). Known roosting sites in California include mine tunnels, limestone caves, lava tubes, buildings, and other man-made structures (Williams 1986). The roosts support larger breeding colonies and are especially susceptible to disturbance (Williams 1986). The project site provides suitable foraging and possibly roosting habitat for this species; therefore, the pale big-eared bat may occur onsite.

Spotted Bat (*Euderma maculatum*)

Spotted bat is a California Species of Special Concern. It is an extremely rare species that is very striking in appearance but poorly known. Although more widespread in the deserts of Southern California, the range of the spotted bat includes parts of the coastal slope of the Transverse and Peninsular Mountain Ranges from Ventura to San Diego county. The spotted bat occurs in a range of habitats from arid desert and grasslands through mixed conifer forests (Zeiner 1990). Known roosting habitat for this species consists of rock crevices. The project site does not provide suitable habitat and is outside of the current known range for this species; therefore, the spotted bat is not expected to occur onsite.

Western Mastiff Bat (*Eumops perotis*)

Western mastiff bat is a California Species of Special Concern. This bat is considered to be an uncommon year-round resident at low elevations in California (Williams 1986, Zeiner et al. 1990). The largest bat in North America, roosts in small colonies in crevices on cliff faces or very large boulders. This species forages over far distances from roost sites and can forage as high as 2,000 feet above ground (Williams 1986). It preys primarily on moths, but also crickets and grasshoppers (Whitaker 1980, Zeiner et al. 1990). The calls of this bat are very loud and can be heard from more than 1,000 feet away (Whitaker 1980). The project site provides potentially suitable foraging and possible roosting habitat for this species; therefore, the western mastiff bat may occur onsite.

California Leaf-nosed Bat (*Macrotus californicus*)

California leaf-nosed bat is a California Species of Special Concern. This species is known to occur from Riverside, Imperial, San Diego, and San Bernardino counties south to the Mexican border. Former populations have disappeared from coastal basins, in Los Angeles to San Diego counties. Habitat for this species includes desert riparian, desert wash, desert scrub, desert succulent scrub, alkali desert scrub, and palm oases. This species prefers to roost in caves and mines, but may also roost in bridges or buildings. The project site provides potentially suitable foraging habitat and roosting habitat for this species; therefore, the California leaf-nosed bat may occur onsite.

Yuma Myotis (*Myotis yumanensis*)

Yuma myotis is California Species of Special Concern. This bat is considered to be a common and widespread year-round resident in California (Zeiner et al. 1990). The Yuma myotis occurs in a wide variety of habitats, but optimal habitat is open woodlands and forests near water for drinking and foraging over (Zeiner et al. 1990). Whitaker (1980) considers this species to always be near ponds, stream, and lakes. Roosting habitat consists of buildings, mines, caves, crevices, and under bridges (Whitaker 1980, Zeiner et al. 1990). The project site provides potentially suitable foraging and roosting habitat for this species; therefore, the Yuma myotis may occur onsite.

San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)

San Diego black-tailed jackrabbit is a California Species of Special Concern. The San Diego subspecies of the widespread black-tailed jackrabbit is restricted to the Pacific slope from Santa Barbara County to northwestern Baja California. This species prefers relatively open areas with grasslands and/or sparse shrub cover. The San Diego black-tailed jackrabbit is not expected to occur on the project site due to a lack of suitable habitat.

San Diego Desert Woodrat (*Neotoma lepida intermedia*)

San Diego desert woodrat is a California Species of Special Concern. This species occupies arid areas with sparse vegetation, especially those comprised of cactus and other thorny plants. This subspecies of desert woodrat is restricted to the Pacific slope in a range that stretches from San Luis Obispo County to northwestern Baja California. Woodrat nests were observed during the general survey. The San Diego desert woodrat may occur on the project site, because suitable habitat is present on the project site.

Southern Grasshopper Mouse (*Onychomys torridus ramona*)

Southern grasshopper mouse is a California Species of Special Concern. It is a territorial, predatory rodent of grassland and sparse scrub vegetation types that prefers sandy soils and has been found to occur from Los Angeles County to northwestern Baja California. The southern grasshopper mouse is not expected to occur on the project site due to lack of suitable habitat.

4.0 PROJECT IMPACTS

4.1 INTRODUCTION

The determination of impacts in this analysis is based on a comparison of maps depicting project grading limits and maps of biological resources in the proposed development site. All construction activities, including staging and equipment areas, are assumed to be within the limits of grading. Both direct and indirect impacts on biological resources have been evaluated. Direct impacts are those that involve the initial loss of habitats due to grading and construction.

Indirect impacts are those that would be related to disturbance from construction activities (e.g., noise, dust) and use of the proposed development site.

Biological impacts associated with the proposed project were evaluated with respect to the following special status biological issues:

- federally- or state-listed Endangered or Threatened species of plant or wildlife;
- non-listed species that meet the criteria in the definition of Rare or Endangered in the CEQA Guidelines;
- streambeds, wetlands, and their associated vegetation;
- habitats suitable to support a federally- or state-listed Endangered or Threatened species of plant or wildlife;
- species designated as California Species of Special Concern;
- habitat, other than wetlands, considered special status by regulatory agencies (USFWS, CDFG) or resource conservation organizations; and
- other species or issues of concern to regulatory agencies or conservation organizations.

The actual and potential occurrence of these resources in the proposed development site was correlated with the following significance criteria to determine whether the impacts of the proposed project on these resources would be considered significant.

4.2 SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines contains the Initial Study Environmental Checklist form that includes questions relating to biological resources. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this Section. Accordingly, a project may create a significant environmental impact if one or more of the following occurs:

- If the project has a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.
- If the project has a substantial adverse effect on any riparian habitat or other special status natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS.
- If the project has a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- If the project interferes substantially with the movement of any native or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.

- If the project conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- If the project conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Section 15065(a), *Mandatory Findings of Significance*, of the CEQA Guidelines states that a project may have a significant effect on the environment if "...the project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species..."

An evaluation of whether an impact on biological resources would be substantial must consider the resource and how that resource fits into a regional or local context. Substantial impacts would be those that would substantially diminish, or result in the loss of, an important biological resource or those that would obviously conflict with local, State or Federal resource conservation plans, goals, or regulations. Impacts are sometimes locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.

Section 15380 of the CEQA Guidelines indicates that a lead agency can consider a non-listed species to be Rare or Endangered for the purposes of CEQA if the species can be shown to meet the criteria in the definition of Rare or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special status species was considered according to the definitions for Rare and Endangered listed in Section 15380 of the CEQA guidelines.

The actual and potential occurrence of these resources on the project vicinity was correlated with the previously identified significance criteria to determine whether the impacts of the proposed project on these resources would be significant.

Potential impacts are grouped below according to topic. The numbered mitigation measures at the end of this section directly correspond with the numbered impact statements. This analysis assumes all areas within the project site will be directly impacted.

4.3 DIRECT IMPACTS

4.3.1 PLANT AND VEGETATION TYPE IMPACTS

A total of 171.01 acres of native and non-native vegetation types including urban areas, would be impacted onsite and offsite by the proposed project. These areas are discussed below, summarized in Table 3, and illustrated in Exhibits 5 and 6.

TABLE 3
VEGETATION TYPES IMPACTED BY THE PROPOSED PROJECT

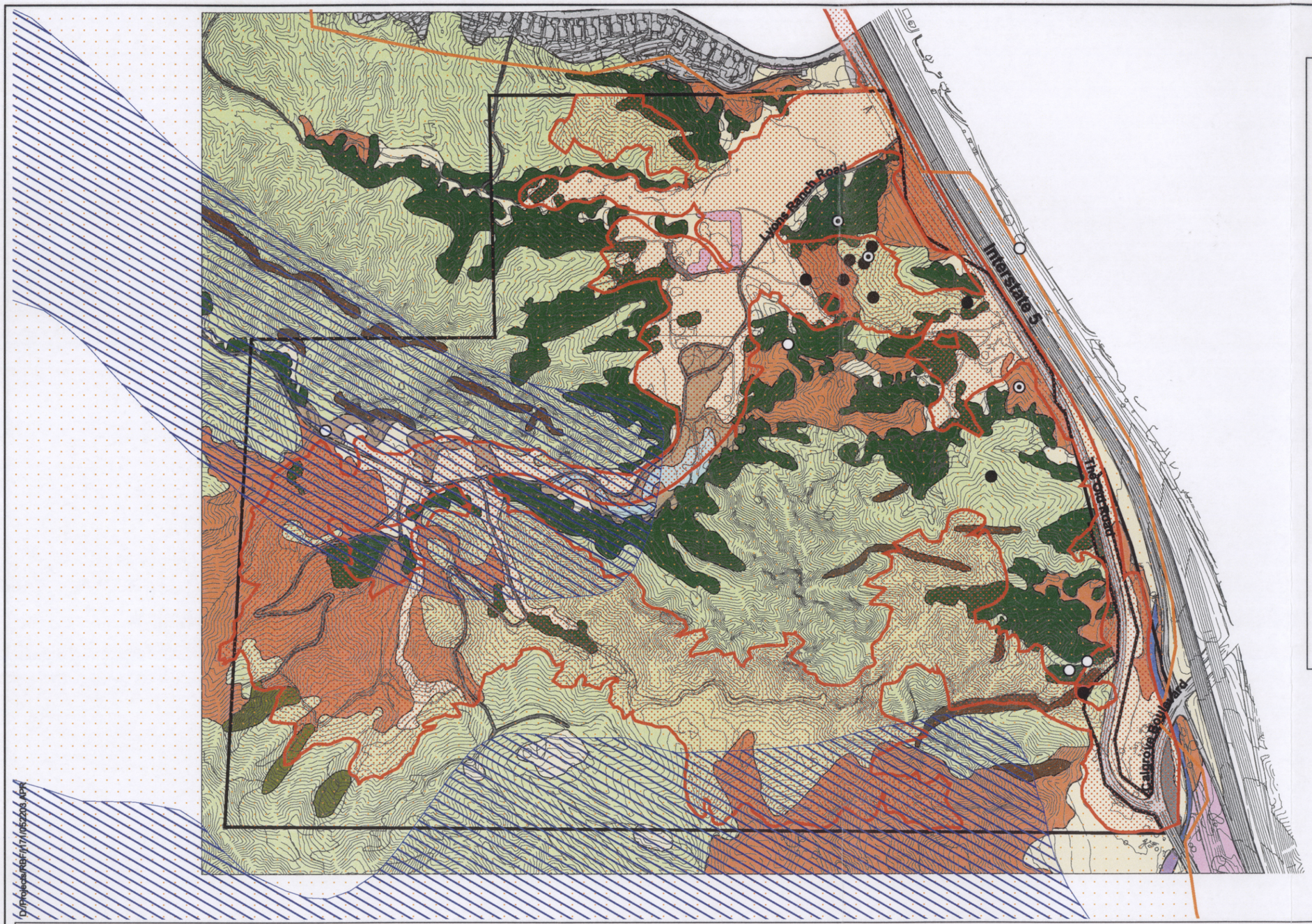
Vegetation Type	Onsite Existing Acreage (Pre-October 2003 Wildfire)	Onsite Impact Acreage	Offsite Impact Acreage	Total Impact Acreage
Mule Fat Scrub	6.51	4.22	0.00	4.22
Willow Riparian Woodland	1.92	1.28	0.00	1.28
Gravelly Wash	0.00	0.00	0.00	0.00
Coast Live Oak Woodland	55.82	10.01	0.21	10.22
Southern California Black Walnut Woodland	2.60	0.68	0.00	0.68
Coastal Sage Scrub	56.74	34.51	1.93	36.44
Chaparral	172.18	62.29	0.52	62.81
Cliff Face	5.47	1.48	0.00	1.48
Non-native Grassland	50.16	40.04	2.73	42.77
Ornamental	0.88	0.83	0.00	0.83
Disturbed	4.14	3.06	0.61	3.67
Concrete Channel	0.04	0.04	0.00	0.04
Developed	1.46	1.20	4.84	6.04
Total	**357.9**	**159.64**	**10.84**	**170.48**

Riparian

A total of 5.50 acres of riparian vegetation including mule fat scrub, willow riparian woodland, and gravelly wash will be impacted by project implementation. These habitats were burned in the Simi Fire, but are expected to recover quickly. Impacts are considered significant because of the limited distribution of riparian habitats in southern California. The jurisdictional delineation identified that 2.96 acres of ACOE jurisdictional "wetland and waters of the U.S." and 5.74 acres of CDFG jurisdictional boundaries are located within the impact area. Impacts on riparian vegetation would be mitigated to below the level of significant with implementation of Mitigation Measure #1.

Coastal Sage Scrub

A total of 36.44 acres of burned coastal sage scrub habitat will be impacted by project implementation. Although the vegetation burned in the Simi Fire, coastal sage scrub recovers quickly and may potentially support habitat for special status species. Impacts on this vegetation type would be considered significant due to the loss of this vegetation type in



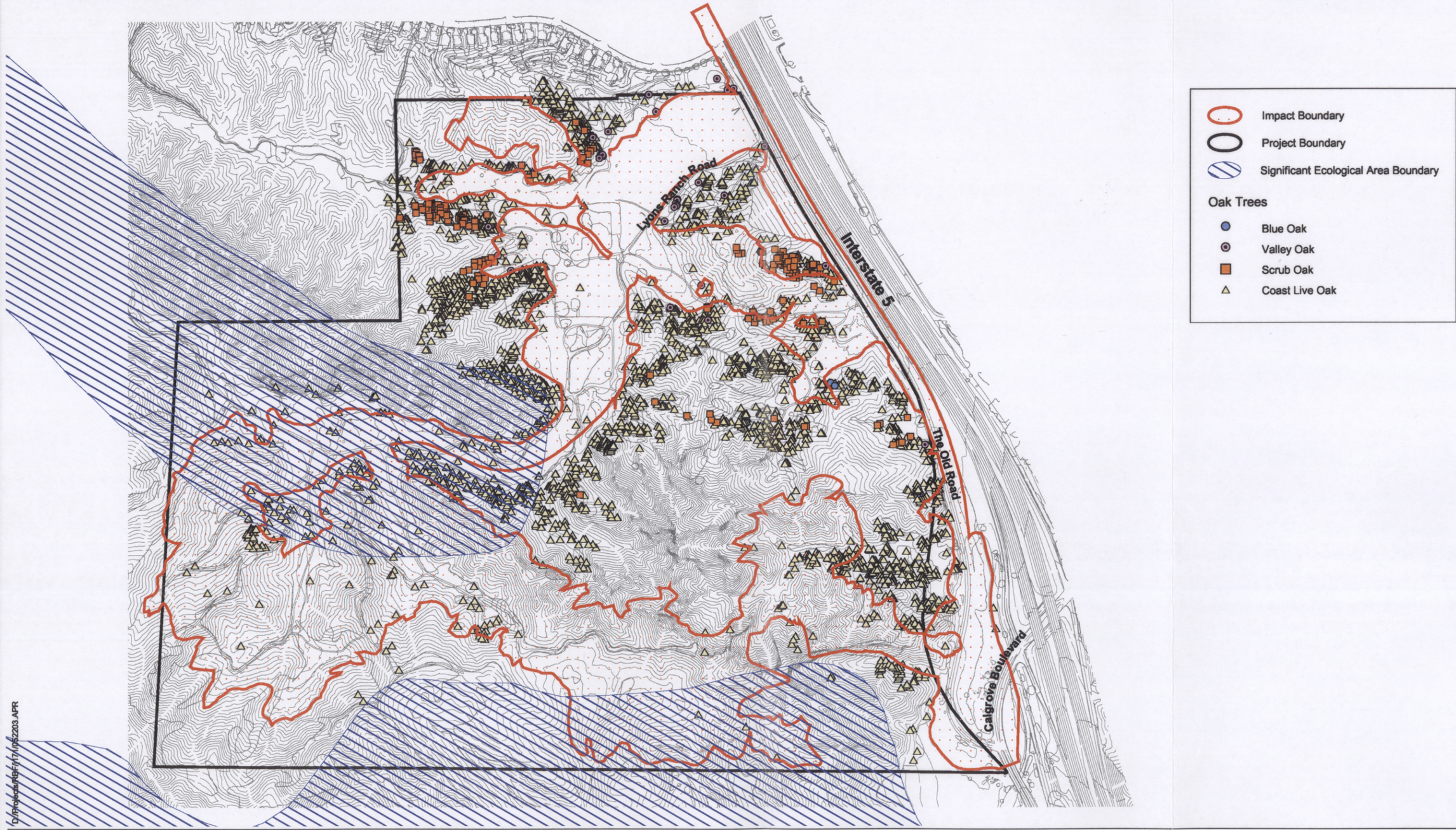
Project Impacts

Exhibit 5

Lyons Canyon Ranch

BonTerra CONSULTING

R:/Projects/RBF/j171/Ex5_PI_102604.pdf



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Oak Tree Impacts

Exhibit 6

Lyons Canyon Ranch

BonTerra CONSULTING

R:/Projects/RBF/171/Ex6_Oakl_102604.pdf

southern California and the potential for this habitat to support special status species. Implementation of Mitigation Measure #3 reduces the impact to a level a less than significant.

Chaparral

A total of approximately 62.81 acres of chaparral would be impacted by the proposed project. Impacts to this vegetation type would not be considered significant due to the relatively widespread distribution of this vegetation type in southern California. Therefore, impacts would be considered adverse, but not significant, and no mitigation would be required under CEQA.

Coast Live Oak and Southern California Black Walnut Woodland

Approximately 10.22 acres of coast live oak woodland and 2.60 acres of southern California black walnut woodland would be impacted by the proposed project. A total of 525 oaks would be impacted and 186 would be encroached by the proposed project. Oak trees encroached by disturbance that changes grade, hydrology, soil conditions, etc., may potentially impact a tree. Impacts to coast live oak woodland would be considered significant due to the special status of oak trees in Los Angeles County. The County protects all species of oak with a circumference of 25 inches or greater. Approximately 0.68 acres of southern California black walnut woodland would be impacted by the proposed project. Impacts to southern California black walnut woodland would be considered less than significant and would not require mitigation. Impacts on coast live oak woodland would be mitigated to below the level of significant with implementation of Mitigation Measure #2.

Cliff Face

A total of approximately 1.48 acres of cliff face would be impacted by the proposed project. Impacts to this vegetation type would not be considered significant due to the limited habitat value provided by sparse cliff face vegetation. Impacts on this vegetation type is considered less than significant. Therefore, no mitigation would be required.

Non-native Grassland, Ornamental, Disturbed, Concrete Channel, Developed

The non-native grassland, ornamental, disturbed, and developed areas contain some native plant species, but are generally dominated by non-native species and have a low biological value. Impacts on these vegetation types/areas are considered less than significant. Therefore, no mitigation would be required.

4.3.2 WILDLIFE IMPACTS

To assess impacts on wildlife, the total impact on a given vegetation type that provides habitat for wildlife was evaluated. Exhibit 3 illustrates the vegetation types (i.e., wildlife habitat) that will be impacted as a result of construction of the proposed project. The following discussion of wildlife impacts focuses on the common species occurring on the project site. Impacts on special status wildlife species are discussed separately in Section 4.3.3 of this report.

General Habitat Loss, Wildlife Loss, Wildlife Movement, and Habitat Fragmentation

Construction of the proposed project would result in the loss of approximately 117.13 acres of native habitat that provide valuable nesting, foraging, roosting, and denning opportunities for a wide variety of wildlife species. Implementation of the project would further fragment existing wildlife habitat and wildlife travel routes on and in the vicinity of the project site. In addition, the proposed project would result in a reduction of open space habitats that support the regionally valuable wildlife corridor of East and Rice Canyon. Increased light and noise pollution and the concomitant increase in human activity after completion of the proposed development would likely further degrade the quality of this linkage in the vicinity of the proposed project. Mitigation Measure #3 would reduce the impacts of edge effects on high quality habitat fragmentation to less than significant.

In addition, implementation of the proposed project would result in the loss of 53.35 acres of non-native habitats that provide lower quality wildlife habitat. However, these non-native habitats do provide nesting, foraging, roosting, and denning opportunities for some species. Removing or altering habitats on the project site would result in the loss of small mammals, reptiles, amphibians, and other animals of slow mobility that live in the proposed project's direct impact area. More mobile wildlife species now using the project site would be forced to move into remaining areas of open space, consequently increasing competition for available resources in those areas. This situation would result in the loss of individuals that cannot successfully compete. These impacts on local wildlife movement would be considered adverse, though less than significant, because of the large areas of open space to the south and west of the project site.

4.3.3 SPECIAL STATUS BIOLOGICAL RESOURCE IMPACTS

Plants

Four special status plant species were observed on the project site during the 2004 focused surveys conducted by BonTerra Consulting:

- Occasional individuals of southern California black walnut;
- Occasional individuals of Peirson's morning-glory;
- Approximately 1100 individual Plummer's mariposa lilies; and
- Approximately 600 individual intermediates (hybrids) of club-haired mariposa lily and slender mariposa lily.

The slender and Plummer's mariposa lilies are CNPS List 1B species, considered rare, threatened, or endangered in California and elsewhere; impacts on these species may be considered significant by the County of Los Angeles (County). These species are typically considered to meet the criteria of Section 15380 of CEQA, which states that species that are not formally listed by the USFWS or CDFG can be treated as if they are listed if they meet the definition of Threatened or Endangered. Impacts on CNPS List 1B species would be

considered significant depending on the size of the population located within the impact area, and the findings of the County. Impacts would be reduced to less than significant with implementation of Mitigation Measure #4.

The club-haired mariposa lily, Peirson's morning-glory, and southern California black walnut are CNPS List 4 species, considered to have limited distributions. Although these species are declining in the region, they do not meet the significance criteria specified in Section 15380 of CEQA. Impacts on these species would be considered less than significant. Therefore, no mitigation would be required.

Wildlife

The proposed project would result in the loss of potential habitat for special status wildlife species with potential to occur on the project site. Potential impacts to special status wildlife species were determined by evaluating impacts to the habitat where these species typically occur.

Fish

As discussed earlier, fish would not be expected to occur in the seasonal watercourses on the project site. Therefore, there would be no impacts on the arroyo chub, Santa Ana sucker, or unarmored threespine stickleback, and no mitigation would be required.

Amphibians

The coast range newt California red-legged frog and arroyo toad are not be expected to occur on the project site. Therefore, there would be no impact on these species, and no mitigation would be required.

The western spadefoot may occur on the project site. The project would result in the loss of potentially occupied habitat for this species. The western spadefoot may meet the significance criteria in Section 15380 of CEQA. Therefore, impacts to western spadefoot, if it were to occur on the site would be considered adverse and significant. Impacts would be reduced to less than significant with implementation of Mitigation Measure #5.

Reptiles

The south coast garter snake is not be expected to occur on the project site. Therefore, there would be no impact on this species and no mitigation would be required.

The southwestern pond turtle, silvery legless lizard, coastal western whiptail, San Diego horned lizard, coast patch-nosed snake, and two-striped garter snake may occur on the project site. The project would result in the loss of potentially occupied habitat for these species. Although these species are declining in the region, these species do not meet the significance criteria in

Section 15380 of CEQA. Therefore, these impacts would be considered adverse, but not significant and no mitigation would be required.

Birds

The Swainson's hawk, western yellow-billed cuckoo, western burrowing owl, short-eared owl, southwestern willow flycatcher, least Bell's vireo, coastal cactus wren, Coastal California gnatcatcher, western yellow warbler, yellow-breasted chat, and tricolored blackbird are not expected to occur on the project site due to lack of suitable habitat. The ferruginous hawk and merlin and are only expected to occur onsite as rare migrants. Therefore, there would be no impact on these species and no mitigation would be required.

The project site provides potentially suitable foraging and/or nesting habitat for the white-tailed kite, northern harrier, sharp-shinned hawk, Cooper's hawk, golden eagle, American kestrel, merlin, prairie falcon, long-eared owl, loggerhead shrike, California horned lark, southern California rufous-crowned sparrow, and Bell's sage sparrow. Any impacts on these species may be considered significant under Section 15380 of CEQA if construction occurs in during nesting season and these species are present. In addition, impacts on any active raptor nest (common or special status species) would be considered a violation of the California Fish and Game Code Sections 3503, 3503.5, and 3513. Therefore, any impact on a nest of these species or common raptor species would be considered significant. Implementation of Mitigation Measure #6 would reduce any potential impact on these species during construction to less than significant.

Mammals

The spotted bat, San Diego black-tailed jackrabbit and southern grasshopper mouse are not expected to occur on the project site. Therefore, there would be no impact on these species and no mitigation would be required.

The San Diego desert woodrat may occur on the project site. Project implementation would result in the loss of potentially suitable habitats for this species. Although this species is declining in the region, it does not meet the significance criteria in Section 15380 of CEQA. Therefore, impacts on San Diego desert woodrat would be considered adverse but not significant.

The pallid bat, pale big-eared bat, western mastiff bat, California leaf-nosed bat, and Yuma myotis may forage and nest on the project site. Project impacts are not expected to affect the overall availability of prey on the project site for bats foraging at night. However, project implementation would result in the loss of some roosting habitat for bats. Impacts on roosting habitat for bats would not meet the significance criteria in Section 15380 of CEQA. Therefore, impacts on bat roosts would be considered adverse but not significant and no mitigation would be required.

4.4 INDIRECT IMPACTS

4.4.1 NOISE IMPACTS ON SPECIAL STATUS PLANTS AND WILDLIFE

Noise levels on the project site would increase over present levels during construction of the proposed project. During construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and denning activities for a variety of wildlife species. These impacts are considered adverse and significant, because the proposed project occurs adjacent to natural open space areas that support high wildlife value. Nesting raptors and bird species may potentially incur temporary short-term impacts from construction noise, if present in the vicinity of the project site, and may be temporarily displaced due to these disturbances. Indirect noise impacts on these species would be considered significant because these species are protected by state wildlife agencies. Impacts on these species would be reduced to less than significant with implementation of Mitigation Measure #6.

Noise impacts would also increase substantially over present levels when the land use is converted to a residential community. As a result, wildlife habitat remaining on and in the vicinity of the site adjacent to these uses would be considered disturbed. Therefore, wildlife species stressed by noise may disperse from the remaining habitat on and in the vicinity of the site, leaving only wildlife tolerant of human activity. Chronic (permanent) noise impacts would be considered adverse, but less than significant and mitigation is not required.

4.4.2 INCREASED DUST AND URBAN POLLUTANTS

Grading activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees, shrubs, and herbs. The respiratory function of the plants in the area would be impaired when dust accumulation is excessive. Therefore, the indirect effect of project construction on the native vegetation in the immediate vicinity of the construction area is considered adverse but not significant and would not require mitigation.

Additional impacts on the biological resources in the area could occur as a result of changes in water quality and water velocity. Urban runoff from the proposed development site containing petroleum residues and the improper disposal of petroleum and chemical products from construction equipment (temporary) or residential areas (i.e., cars, improper disposal of chemicals) (permanent) could have the potential to adversely affect water quality and, in turn, affect populations of aquatic species (fish and amphibians), as well as those that use riparian areas (amphibians, reptiles, birds, and mammals). Water quality could also be adversely affected by runoff of nutrients from urban development. These impacts are considered potentially significant. Implementation of Mitigation Measure #7 would reduce these impacts to less than significant.

4.4.3 INVASIVE EXOTIC PLANT SPECIES

The proposed project may include landscaping adjacent to the commercial development. The landscaping may include planting ornamental species that are known to be particularly invasive (e.g., Japanese honeysuckle [*Lonicera japonica*], fan palm [*Washingtonia robusta*], Peruvian pepper tree [*Schinus molle*], etc.). Seeds from invasive species may escape to natural areas and degrade the native vegetation, particularly along downstream riparian areas. These impacts would be considered adverse, and potentially significant considering the two SEA's on the project site. Implementation of Mitigation Measure #8 would reduce these impacts to less than significant.

4.4.4 NIGHT LIGHTING

Lighting of the urban development would inadvertently affect the behavior patterns of nocturnal and crepuscular (active at dawn and dusk) wildlife at these areas. Of greatest concern is the affect on small ground-dwelling animals that use the darkness to hide from predators, and on owls that are specialized night foragers. Night lighting could inhibit wildlife from using the habitat adjacent to lighted areas. These impacts, while adverse, would not be expected to reduce any current wildlife population below self-sustaining levels. These impacts would be considered adverse, but less than significant.

4.4.5 HUMAN ACTIVITY

The residents of the proposed development may use the proposed open space for passive recreation (e.g., hiking). This would increase the noise and disturbance of habitat areas remaining on the site, especially those adjacent to the proposed development. Human disturbance could disrupt normal foraging and breeding behavior of wildlife remaining on the site, substantially diminishing the value of habitat areas remaining. In addition, pets in these neighborhoods (i.e., cats and dogs) would become introduced predators and would increase the stresses of wildlife remaining in the open space areas on the site. This impact would be considered potentially significant. Implementation of Mitigation Measure #9 would reduce this impact to less than significant.

4.5 CUMULATIVE IMPACTS

The regional environmental setting for the project, as previously described in Section 1.1, was analyzed for cumulative impacts on biological resources. Per CEQA, "cumulative impacts to two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts". A regionally cumulative reduction in the diversity and density of native plant and wildlife species would be considered a significant impact. Developmental projects located in the region were reviewed and are summarized in Table 4.

TABLE 4
CUMULATIVE PROJECT IMPACTS
ON BIOLOGICAL RESOURCES

Project Name and/or Location	Scrub Vegetation (acres)	Riparian Vegetation (acres)	Native Grassland Vegetation (acres)	Woodland Vegetation (acres)	Impacted General Open Space Area (acres)
Riverpark	95.5 acres	4.3 acres	—	0.4 acres	100.2 acres
Plum Canyon	10 acres	1.9 acres	—	3 acres	14.9 acres
Gate-King Industrial Park	Not available	11.55 acres	Not available	Not available	222 acres
Porta Bella/Whittaker Bermite	Not available	Not available	Not available	Not available	527 acres
Tesoro Del Valle	44 acres	—	—	19 acres	63 acres

The proposed project would impact 36.44 acres of burned scrub vegetation, 5.5 acres of burned riparian, and 10.90 acres of burned woodland, totaling 52.84 acres of open space impacts. Relative to the other existing or proposed projects within the region, there is a less than significant biological impact to biological resources.

5.0 MITIGATION MEASURES

This section focuses on the development of mitigation measures for those impacts of the proposed project found to be significant or potentially significant. Strategies to mitigate each impact to a less than significant level are identified and described in the following section.

5.1 VEGETATION

5.1.1 MITIGATION MEASURE #1: RIPARIAN HABITAT

This mitigation measure offsets the impacts to jurisdictional areas on the project site. There were 2.96 acres of ACOE jurisdictional "wetlands and waters of the U.S." and 5.74 acres of CDFG jurisdictional boundaries within the proposed development site.

Compensatory mitigation for the loss of wetland or riparian function and values is a fundamental component of the applicable regulatory programs. Mitigation can consist of 1) avoidance or minimization of impacts, 2) compensation in the form of habitat restoration, or 3) compensation through participation in a mitigation bank. Avoidance and minimization of impacts is preferred by the agencies. Any compensation through restoration should be on-site and in kind. The exact requirements of any special permit conditions established for the proposed project would be dictated by the ACOE and/or the CDFG following review of the formally submitted project application.

The objective of the mitigation is to ensure no net loss of habitat values from the project. Prior to implementation of any restoration, a detailed program will be developed by the project applicant and will be approved by the ACOE and CDFG as part of the 404. The program will contain the following items:

1. Responsibilities and qualifications of the personnel to implement and supervise the plan. The responsibilities of the landowner, technical specialists, and maintenance personnel that will supervise and implement the restoration plan will be specified.

2. Site selection. The site for the mitigation will be determined in coordination with the project applicant and resource agencies. The site will either be located on the proposed development site in a dedicated open space area or dedicated open space area will be purchased offsite. Appropriate sites will have suitable hydrology and soils for the establishment of riparian species.

3. Site preparation and planting implementation. The site preparation will include 1) protection of existing native species, 2) trash and weed removal, 3) native species salvage and reuse (i.e., duff), 4) soil treatments (i.e., imprinting, decompacting), 5) temporary irrigation installation, 6) erosion control measures (i.e., rice or willow wattles), 7) seed mix application, and 8) container species.

4. Schedule. A schedule will be developed which includes planting to occur in late fall and early winter between October 1 and January 30.

5. Maintenance plan/guidelines. The maintenance plan will include 1) weed control, 2) herbivory control, 3) trash removal, 4) irrigation system maintenance, 5) maintenance training, and 6) replacement planting.

6. Monitoring plan. The monitoring plan will include 1) qualitative monitoring (i.e., photographs and general observations), 2) quantitative monitoring (i.e., randomly placed transects), 3) performance criteria as approved by the resource agencies, 4) monthly reports for the first year and bimonthly thereafter, and 5) annual reports for five years that will be submitted to the resource agencies on an annual basis. The site will be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas; however, if there is successful coverage prior to five years, the project applicant may request to be released from the monitoring requirements from ACOE and CDFG.

7. Long-term preservation. Long-term preservation of the site will also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development. A conservation easement and a performance bond will be secured prior to implementation of the site.

8. In addition, earth-moving equipment will avoid maneuvering in areas outside the identified limits of grading in order to avoid disturbing open space areas that will remain undeveloped. Prior to grading, the open space limits will be marked by the construction supervisor and the project biologist. These limits will be identified on the grading plan. No earth-moving equipment will be allowed within the open space area.

5.1.2 MITIGATION MEASURE #2: COAST LIVE OAK WOODLAND

A full oak tree report with the health, diameter of breast height, and canopy diameter of each tree within the impact area and fuel modification zone will be submitted to the County of Los Angeles prior to grading. The report will also outline the mitigation for removal of the oak trees. The mitigation will include the following measures:

1. Prior to grading, orange snow fencing will be installed around trees (outside the dripline) that would not be impacted by construction. Fencing will be in place and inspected prior to commencement of grading. This fencing will remain in place throughout the entire period of construction.

2. For each oak tree removed, the mitigation will require replacement trees of indigenous oak species in the ratio of at least two to one. Each replacement tree will be at least 15-gallon in size and measure at least one inch in diameter one foot above the base.

3. The landscape architect/designer for this project will design these replacement trees into the landscape to replace the habitat of removed woodlands. The habitat will be reviewed by a qualified biologist and will be comparable to the removed woodland.

4. Planting specification will consider the following:

   - Newly planted trees will be planted above grade and maintained for five years, including irrigation, weed control, herbivore protections, and replacement.

   - Amending the backfill soil with wood shavings, oak leaf-mold, etc. is not recommended when existing soil is high in natural organic matter with a sandy loam texture.

   - Recommendations for the need of planting amendments and drainage systems will be based on soil tests of this project and approved by the county.

   - Any county approved work within the driplines of saved trees, including branch removal, will be under the inspection of a qualified arborist.

- Landscaping requiring irrigation will not be planted within the dripline of oaks due to the susceptibility of native oaks to root rot caused by excessive unseasonable irrigation. The design and installation of landscape irrigation systems outside the dripline of the oaks will be such that the area within the dripline is not wetted during operation of the system. In addition, surface runoff from impermeable surfaces will be directed away from oaks; where natural topography has been altered, provisions should be made for drainage away from trunks of oaks so that water will not pond or collect within the dripline of any oak.

5.1.3 MITIGATION MEASURE #3: COASTAL SAGE SCRUB

The loss of 36.44 coastal sage scrub within the impact area is considered to be a significant impact. The impact to coastal sage scrub will be mitigated at an acreage rate of 2:1, equaling 72.88 acres of mitigation. Mitigation can consist of 1) avoidance or minimization of impacts, 2) compensation in the form of habitat restoration, or 3) compensation through participation in a mitigation bank. Avoidance and minimization of impacts is preferred by the agencies. Any compensation through restoration should be on-site and in kind.

The objective of the mitigation is to ensure no net loss of habitat values from the project. Prior to implementation of any restoration, a detailed program will be developed by the project applicant and will contain the following items:

1. Responsibilities and qualifications of the personnel to implement and supervise the plan. The responsibilities of the landowner, technical specialists, and maintenance personnel that will supervise and implement the restoration plan will be specified.

2. Site selection. The site for the mitigation will be determined in coordination with the project applicant and resource agencies. The site will either be located on the proposed development site in a dedicated open space area or dedicated open space area will be purchased offsite. Appropriate sites will have suitable hydrology and soils for the establishment of riparian species.

3. Site preparation and planting implementation. The site preparation will include 1) protection of existing native species, 2) trash and weed removal, 3) native species salvage and reuse (i.e., duff), 4) soil treatments (i.e., imprinting, decompacting), 5) temporary irrigation installation, 6) erosion control measures (i.e., rice or willow wattles), 7) seed mix application, and 8) container species.

4. Schedule. A schedule will be developed which includes planting to occur in late fall and early winter between October 1 and January 30.

5. Maintenance plan/guidelines. The maintenance plan will include 1) weed control, 2) herbivory control, 3) trash removal, 4) irrigation system maintenance, 5) maintenance training, and 6) replacement planting.

6. Monitoring plan. The monitoring plan will include 1) qualitative monitoring (i.e., photographs and general observations), 2) quantitative monitoring (i.e., randomly placed transects), 3) performance criteria as approved by the resource agencies, 4) monthly reports for the first year and bimonthly thereafter, and 5) annual reports for five years that will be submitted to the resource agencies on an annual basis. The site will be monitored and maintained for five years to ensure successful establishment of coastal sage scrub habitat within the restored and created areas.

7. Long-term preservation. Long-term preservation of the site will also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development. A conservation easement and a performance bond will be secured prior to implementation of the site.

8. In addition, earth-moving equipment will avoid maneuvering in areas outside the identified limits of grading in order to avoid disturbing open space areas that will remain undeveloped. Prior to grading, the open space limits will be marked by the construction supervisor and the project biologist. These limits will be identified on the grading plan. No earth-moving equipment will be allowed within the open space area.

5.2 SPECIAL STATUS PLANT SPECIES

5.2.1 MITIGATION MEASURE #4: CLUB-HAIRED/SLENDER MARIPOSA LILY AND PLUMMER'S MARIPOSA LILY

Impacts on the club-haired/slender mariposa lily and Plummer's mariposa lily are considered significant, but can be mitigated to a level less than significant by one of the following options:

Option A. **Avoidance:** Areas with club-haired/slender mariposa lily or Plummer's mariposa lily will be avoided and preserved in perpetuity and a conservation easement will be placed over the preserved areas.

Option B. **Relocation:** Option B is not advisable due to the lack of known success in relocating mariposa lilies. A pre-construction survey during the peak flowering period, approximately March through June, will be conducted by the project biologist. Each impacted lily bulb will be clearly delineated with pin flags for collection by a qualified bulb collector. In addition, the seeds will be collected, cleaned, and stored by a qualified nursery or institution with appropriate storage facilities. It is preferable to collect the bulbs after the flowering period when the plants are dormant. Another option for the

relocation of the bulbs is to move the topsoil in large blocks from areas of high lily concentration to the selected revegetation site.

Following seed and bulb collection, the lilies will be relocated into a suitable mitigation site in the undeveloped portion of the project site, or in an adjacent undeveloped acreage that will be preserved in perpetuity. A qualified biologist will be selected by the applicant to prepare and implement a detailed mitigation plan, which will include the following requirements:

- Following collection, seeds and bulbs will be stored by a qualified nursery, or by an institution with appropriate storage facilities. Then, the upper 12 inches of topsoil from the lily locations will be scraped, stockpiled, and re-spread at the selected mitigation site.

- The mitigation site will be located in dedicated open space on the project site or at an appropriate offsite location. The mitigation site will be within a conservation easement. The site will not be selected in an attempt to enhance existing populations, and should not be impacted by any pesticides or herbicides used on adjacent properties.

- The mitigation site will be prepared for seeding as described in a conceptual restoration plan.

- The topsoil will be re-spread in the selected location as approved by the project biologist. Approximately 60 percent of the seeds and bulbs will be placed in the site during the fall, following soil preparation. Forty percent of the seeds and bulbs will be kept in storage for subsequent seeding, if necessary.

- A detailed maintenance and monitoring plan for the mitigation site will be developed by a qualified biologist. The plan will include descriptions of maintenance activities appropriate for the site, monitoring requirements, and annual reporting requirements. The project biologist will have the full authority to suspend any operation on the project site that is, in the qualified biologist's opinion, not consistent with the restoration plan. Any disputes regarding the consistency of an action with the restoration plan will be resolved by the applicant and the County biologist.

- The performance criteria developed in the maintenance and monitoring plan will include requirements for a minimum of 60 percent germination of the amount of plant material collected and transferred to the mitigation site. The performance criteria should also include percent cover, density, and seed production requirements, and will be developed by the project biologist following habitat

analysis of an existing high-quality lily habitat. Performance monitoring will be conducted by a qualified biologist.

- If the germination goal of 60 percent is not achieved following the first season, remediation measures will be implemented prior to planting with the remaining 40 percent of collected seeds and bulbs. Remedial measures will include at a minimum: soil testing and amendments, control of invasive species, and physical disturbance of the planted areas by raking (or similar actions) to provide scarification of the seed. Additional mitigation measures may be suggested as determined appropriate by the project biologist.

- Potential seed sources from donor sites will also be identified in case it becomes necessary to collect additional seeds for use on the site, following performance of remedial measures.

The site will be maintained for five years to ensure that the mariposa lily populations are self-sustaining.

5.3 SPECIAL STATUS WILDLIFE SPECIES

The proposed project would potentially result in impacts considered to be significant on several special status wildlife species that occur or potentially occur on the project site. These significant impacts would be reduced to less than significant after implementation of the following mitigation measures.

5.3.1 MITIGATION MEASURE #5: WESTERN SPADEFOOT

A focused survey will be conducted on the proposed development site for the western spadefoot toad prior to grading and during the breeding season for this species (February through May). The survey results will be submitted within 45 days after completion of the last survey to the CDFG for concurrence. If it is determined that the western spadefoot is not present on the proposed development site, then no further mitigation is necessary. However, if the western spadefoot is located on the proposed development site then a relocation program will be developed. The relocation program will include a detailed methodology for locating, capturing, and relocating individuals prior to construction. The program will identify a suitable location for relocation of the western spadefoot prior to capture. The relocation program will require a biologist with the necessary permits for handling the western spadefoot. Prior to implementation of the relocation program, the program and the biologist(s) implementing the program will be subject to approval of the CDFG.

5.3.2 MITIGATION MEASURE #6: NESTING RAPTORS AND BIRD SPECIES

The loss of an active nest of any raptor species or bird species on the project site would be considered significant. Thirty days prior to the onset of construction activities, a qualified

biologist will survey within the limits of project disturbance for the presence of any active raptor and bird nests. Any nest found during survey efforts will be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys will be provided to the CDFG.

If nesting activity is present at any raptor nest site, the active site will be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for bird species in the region of the project site normally occurs from February 1 to June 30. To protect any nest site, the following restrictions on construction are required between February 1 and June 30 (or until nests are no longer active as determined by a qualified biologist): (1) clearing limits will be established a minimum of 300 feet in any direction from any occupied nest (or as otherwise deemed appropriate by the monitoring biologist) and (2) access and surveying will not be allowed within 100 feet of any occupied nest (or as otherwise deemed appropriate by the monitoring biologist). Any encroachment into the 300/100 foot buffer area around the known nest will only be allowed if it is determined by a qualified biologist that the proposed activity will not disturb the nest occupants. Construction during the non-nesting season can occur only at the sites if a qualified biologist has determined that fledglings have left the nest.

5.4 INDIRECT IMPACTS

The proposed project has the potential to indirectly impact biological resources on the project site. These potential indirect impacts could be reduced to a level of less than significant through the implementation of the following mitigation measures.

5.4.1 MITIGATION MEASURE #7: INCREASED RUNOFF AND URBAN POLLUTANTS

Implementation of Best Management Practices (BMPs) would reduce this impact to less than significant. Additionally, the project will be subject to storm water permitting, which will ensure that any impacts are reduced to below the level of significance. Prior to the issuance of a grading permit, the project applicant will apply for coverage under the state water resources control board's general permit for storm water discharge associated with construction activity and will comply with all the provisions of the permit, including the development of a storm water pollution prevention plan, which includes provisions for the implementation of best management practices and erosion control measures. Best management practices will include both structural and non-structural measures. The purpose of this mitigation measure is to insure that site runoff does not adversely affect downstream biological resources.

5.4.2 MITIGATION MEASURE #8: INVASIVE EXOTIC SPECIES

Landscape designs will be submitted to the city for review and approval by a qualified biologist. The review will ensure that no invasive, exotic plant species such as those listed in the California Invasive Plant Council 1999 List (CalIPPC 1999) are used in any proposed landscaping, and that suitable substitutes are proposed. Ideally, only native species should be

used in landscaping along a boundary bordering open space/SEA. Natives used should include coastal sage scrub, chaparral and woodland species that currently occur on the project site.

5.4.3 MITIGATION MEASURE #9: HUMAN DISTURBANCE

To limit the amount of human disturbance on natural open space areas on and adjacent to the project site, a fencing plan will be submitted to the city. Prior to obtaining occupancy permits, signs and split-rail fencing (the latter, if appropriate) will be posted directing people to keep out of the natural open space areas and revegetation areas (if applicable). In addition, the project applicant will be required to post signage stating that dogs will be required to be leashed in areas near the project boundary.

6.0 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the recommended measures will mitigate biological impacts to a level that is considered less than significant.

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APPENDIX A

PLANT AND WILDLIFE COMPENDIA

***PTERIDOPHYTES* - FERNS AND ALLIES**
PTERIDACEAE - BRAKE FAMILY
Pellaea andromedifolia coffee fern
Pentagramma triangularis goldenback fern
SELAGINELLACEAE - SPIKE-MOSS FAMILY
Selaginella bigelovii Bigelow's or bushy spike-moss
GYMNOSPERMS
CUPRESSEACEAE - CYPRESS FAMILY
Cupressus sp. cypress
PINACEAE - PINE FAMILY
Pinus sp.
***ANGIOSPERMAE* - FLOWERING PLANTS**
DICOTYLEDONES
ANACARDIACEAE - SUMAC FAMILY
Malosma laurina laurel sumac
Rhus ovata sugar bush
Rhus trilobata skunkbush
Toxicodendron diversilobum Western poison oak
APIACEAE (UMBELLIFERAE) - CARROT FAMILY
Bowlesia incana American bowlesia
Conium maculatum poison hemlock
Daucus pusillus rattlesnake weed
Foeniculum vulgare sweet fennel
Sanicula sp. sanicle
Tauschia arguta Southern taushcia
APOCYNACEAE - DOGBANE FAMILY
Vinca major blue periwinkle
ASCLEPIADACEAE - MILKWEED FAMILY
Asclepias eriocarpa Indian milkweed

Asclepias fascicularis narrow-leaved milkweed
ASTERACEAE (COMPOSITAE) - SUNFLOWER FAMILY
Achillea millefolium common yarrow
Acourtia microcephala sacapellote
Ambrosia psilostachya Western ragweed
Ancistocarphus filagineus woolly fish hooks
Artemisia californica California sagebrush
Artemisia douglasiana mugwort
Artemisia dracunculus tarragon
Artemisia tridentata great basin sagebrush
Baccharis pilularis coyote brush
Baccharis salicifolia mule fat
Bidens pilosa common beggar ticks
Carduus pycnocephalus Italian thistle
Centaurea melitensis tocalote
Chrysothamnus nauseosus rabbitbrush
Cirsium occidentale cobweb thistle
Cirsium occidentale var. californica California thistle
Cirsium vulgare bull thistle
Cnicus benedictus blessed thistle
Conyza canadensis common horseweed
Encelia californica bush sunflower
Ericameria palmeri goldenbush
Ericameria pinifolia pine goldenbush
Erigeron foliosus fleabane daisy
Eriophyllum confertiflorum golden yarrow

Filago californica fluffweed
Gnaphalium californicum California everlasting
Gnaphalium luteo-album weedy cudweed
Gnaphalium microcephalum white everlasting
Hazardia squarrosa saw-toothed goldenbush
Hedypnois cretica Crete hedypnois
Helianthus annuus western sunflower
Helianthus gracilentus slender sunflower
Deinandra fasciculata fascicled tarweed
Heterotheca grandiflora telegraph weed
Heterotheca sessiliflora ssp. *sessiliflora* hairy golden aster
Lactuca biennis prickly lettuce
Lactuca saligna willow lettuce
Lactuca serriola wild lettuce
Lessingia filaginifolia cudweed aster
Madia elegans elegant madia
Madia gracilis slender madia
Malacothrix clevelandii Cleveland's malacothrix
Malacothrix saxatilis cliff aster
Micropus californicus Douglas' microseris
Microseris douglasii microseris
Picris echioides bristly ox tongue
Psilocarphus tenellus slender woolly-heads
Rafinesquia californica California chicory
Senecio flaccidus var. *douglasii* sand wash butterweed / groundsel
Senecio vulgaris common groundsel

Silybum marianum milk thistle
Sonchus asper rough sow-thistle / prickly sow-thistle
Sonchus oleraceus common sow-thistle
Uropappus lindleyi silver puffs
BORAGINACEAE - BORAGE FAMILY
Amsinckia menziesii rancher's fiddleneck
Cryptantha sp. cryptantha
Cryptantha intermedia common cryptantha
Cryptantha muricata prickly cryptantha
Heliotropum curassavicum alkali heliotrope
Pectocarya penicillata winged pectocarya
Plagiobothrys nothofulvus rusty popcorn flower
BRASSICACEAE (CRUCIFERAE) - MUSTARD FAMILY
Brassica nigra black mustard
Capsella bursa-pastoris shepherd's purse
Hirschfeldia incana shortpod mustard
Lepidium latifolium broad-leaved peppergrass
Sisymbrium altissimum tumble mustard
Sisymbrium irio London rocket
Thysanocarpus laciniatus narrow-leaved lace pod
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY
Lonicera interrupta honeysuckle
Sambucus mexicana Mexican elderberry
CARYOPHYLLACEAE - PINK FAMILY
Silene gallica windmill pink
Spergula arvensis corn spurry
Stellaria media common chickweed

CHENOPODIACEAE - GOOSEFOOT FAMILY
Atriplex canescens fourwing saltbush
Atriplex rosea redscale
Atriplex semibaccata Australian saltbush
Chenopodium album lamb's quarters
Chenopodium californicum California goosefoot
Chenopodium sp. goosefoot
Russian thistle
CONVOLVULACEAE - MORNING-GLORY FAMILY
Calystegia macrostegia morning-glory
Convolvulus arvensis field bindweed
CRASSULACEAE - STONECROP FAMILY
Crassula connata sand pigmy-stonecrop
Dudleya lanceolata lance-leaved dudleya
CUCURBITACEAE - GOURD FAMILY
Cucurbita foetidissima coyote melon / calabazilla
Marah macrocarpus wild cucumber / cucamonga manroot
Cuscuta californica Californica dodder
ERICACEAE - HEATH FAMILY
Arctostaphylos glauca bigberry manzanita
EUPHORBIACEAE -SPURGE FAMILY
Chamaesyce albomarginata rattlesnake weed
Croton californicus California croton
Eremocarpus setigerus doveweed
Euphorbia peplus petty spurge
Ricinus communis castor bean
FABACEAE (LEGUMINOSAE) - LEGUME/PEA FAMILY
Amorpha californica California false indigo
Astragalus trichopodus locoweed

Lathyrus sp. Wild sweet pea
Lotus corniculatus bird's foot trefoil
Lotus micranthus miniature lotus
Lotus purshianus Spanish lotus
Lotus scoparius deerweed
Lotus strigosus strigose lotus
Lupinus bicolor miniature lupine
Lupinus hirsutissimus stinging lupine
Lupinus microcarpus chick lupine
Lupinus sparsiflorus ssp. *sparsiflorus* Coulter's lupine
Lupinus succulentus arroyo lupine
Lupinus truncatus truncate lupine
Medicago polymorpha bur-clover
Melilotus alba white sweet-clover
Melilotus indica yellow sweet-clover
Trifolium willdenovii tomcat clover
FAGACEAE - OAK / BEECH FAMILY
Quercus agrifolia coast live oak
Quercus douglasii blue oak
Quercus jon-tuckeri Tucker's oak
Quercus lobata valley oak
GERIANIACEAE - GERANIUM FAMILY
Erodium botrys long-beaked filaree
Erodium cicutarium red-stemmed filaree
GROSSULARIACEAE - GOOSEBERRY FAMILY
Ribes aureum var. *gracillimum* golden currant
Ribes malvaceum chaparral currant

HYDROPHYLLACEAE - WATERLEAF FAMILY
Emmenanthe penduliflora whispering bells
Eriodictyon crassifolium thick-leaf yerba santa
Eucrypta chrysanthemifolia common eucrypta
Phacelia cicutaria caterpillar phacelia
Phacelia distans common phacelia
Phacelia imbricata rock phacelia
Phacelia ramosissima var. *latifolia* branching phacelia
Phacelia tanacetifolia tansy phacelia
JUGLANDACEAE - WALNUT FAMILY
Juglans californica Southern California black walnut
LAMIACEAE (LABIATAE) - MINT FAMILY
Lamium amplexicaule common henbit
Marrubium vulgare common horehound
Salvia apiana white sage
Salvia leucophylla purple sage
Salvia mellifera black sage
Trichostema lanatum woolly blue-curls
Trichostema lanceolatum vinegar weed
LOASACEAE - STICK-LEAF FAMILY
Mentzelia laevicaulis blazing star
Mentzelia micrantha *small-flowered stick-leaf*
LYTHRACEAE - LOOSESTRIFE FAMILY
Lagerstroemia indica crape myrtle
MAGNOLIACEA - MAGNOLIA FAMILY
Magnolia sp. Magnolia
MALVACEAE - MALLOW FAMILY
Malacothamnus fasciculatus chaparral bushmallow
Malva parviflora cheeseweed

MYOPORACEAE - MYOPORUM FAMILY
Myoporum laetum myoporum
NYCTAGINACEAE - FOUR-O'CLOCK FAMILY
Mirabilis californica wishbone bush
OLEACEAE - OLIVE FAMILY
Fraxinus dipetala California flowering-ash
ONAGRACEAE - EVENING PRIMROSE FAMILY
Camissonia bistorta Southern suncup
Camissonia boothii shredding primrose
Camissonia californica mustard-like evening primrose
Clarkia cylindrica willow-herb clarkia
Clarkia epilobioides willow-herb clarkia
Clarkia purpurea four-spot clarkia
Clarkia unguiculata elegant clarkia
Epilobium canum California fuchsia
Oenothera californica California evening primrose
OROBANCHACEAE - BROOM-RAPE FAMILY
Orobanche bulbosa chaparral broom-rape
Orobanche fasciculata pine broom-rape
PAEONIACEAE - PEONY FAMILY
Paeonia californica California peony
PAPAVERACEAE (FUMARIACEAE) - POPPY FAMILY
Dendromecon rigida California bush poppy
Eschscholzia californica California poppy
PLANTAGINACEAE - PLANTAIN FAMILY
Plantago erecta dwarf plantain
Plantago lanceolata English plantain / rib grass
Plantago major common plantain
POLEMONIACEAE - PHLOX FAMILY
Allophyllum gilliodes allophyllum

Gilia ochroleuca gilia
Leptodactylon californicum prickly phlox
Linanthus liniflorus flax-flowered linanthus
Navarretia atractyloides holly-leaved skunkweed
Navarretia sp. navarretia
POLYGONACEAE - BUCKWHEAT FAMILY
Chorizanthe staticoides Turkish rugging
Chorizanthe xanti Riverside spineflower
Erigonum angulosum buckwheat
Eriogonum elongatum wand buckwheat
Eriogonum fasciculatum California buckwheat
Polygonum arenastrum common knotweed
Polygonum argyrocoleon Persian knotweed
Pterostegia drymarioides pterostegia / notch leaf
Rumex crispus curly dock
PORTULACACEAE - PURSLANE FAMILY
Claytonia sp. miner's-lettuce
PRIMULACEAE - PRIMROSE FAMILY
Anagallis arvensis scarlet pimpernel
RANUNCULACEAE - CROWFOOT FAMILY
Clematis ligusticifolia Western virgin's bower
Delphinium parryi ssp. *parryi* blue larkspur
RHAMNACEAE - BUCKTHORN FAMILY
Ceanothus crassifolius hoary-leaved lilac
Rhamnus californica California coffee berry
Rhamnus ilicifolia holly-leaved redberry
Rhamnus tomentella desert coffee berry

ROSACEAE - ROSE FAMILY
Adenostoma fasciculatum common chamise
Cercocarpus betuloides California mountain mahogany
Heteromeles arbutifolia toyon
Prunus ilicifolia holly-leaved cherry
Pyrocantha sp. Pyrocantha
Rosa californica California wild rose
Rubus ursinus California blackberry
RUBIACEAE - MADDER FAMILY
Galium aparine common bedstraw
Galium porrigens climbing bedstraw
SALICACEAE - WILLOW FAMILY
Populus fremontii Fremont cottonwood
Salix lasiolepis arroyo willow
SCROPHULARIACEAE - FIGWORT FAMILY
Antirrhinum coulterianum white snapdragon
Castilleja exserta purple owl's clover
Collinsia heterophylla Chinese houses
Keckiella cordifolia heart-leaved bush-penstemon
Keckiella ternata ssp. *ternata* blue-stemmed bush-penstemon
Mimulus aurantiacus bush monkeyflower
Mimulus brevipes slope semaphore
Penstemon centranthifolius scarlet bugler
SIMAROUBACEAE - QUASSIA FAMILY
Ailanthus altissima tree of heaven
SOLANACEAE - NIGHTSHADE FAMILY
Datura wrightii jimsonweed
Nicotiana glauca tree tobacco

Solanum douglasii Douglas' nightshade
Solanum xanti chaparral nightshade
VERBENACEAE - VERVAIN FAMILY
Verbena lasiostachys Western verbena
VIOLACEAE - VIOLET FAMILY
Viola pedunculata johnny jump-ups
***MONOCOTYLEDONES* - MONOCOTS**
CYPERACEAE - SEDGE FAMILY
Carex sp. sedge
IRIDACEAE - IRIS FAMILY
Sisyrinchium bellum California blue-eyed grass
JUNCACEAE - RUSH FAMILY
Juncus mexicanus Mexican rush
LILIACEAE - LILY FAMILY
Bloomeria crocea goldenstars
Calochortus clavatus var. *gracilis* slender mariposa lily
Calochortus plummerae Plummer's mariposa lily
Calochortus venustus butterfly mariposa lily
Chlorogalum pomeridianum wavy-leaved soap plant
Dichelostemma capitatum blue dicks
Yucca whipplei Our Lord's candle
POACEAE - GRASS FAMILY
Avena barbata slender wild oat
Bromus carinatus California brome grass
Bromus diandrus ripgut brome
Bromus hordeaceus soft chess
Bromus madritensis ssp. *rubens* foxtail chess
Bromus tectorum cheat grass
Cynodon dactylon bermuda grass

Distichlis spicata coastal salt grass
Elymus elymoides squirrel tail
Hordeum vulgare cultivated barley
Lamarckia aurea goldentop grass
Leymus condensatus giant wild rye
Leymus glaucus blue wild rye
Leymus trticoides alkali rye
Lolium multiflorum Italian ryegrass
Melica imperfecta small-flowered melic grass
Nasella lepida foothill needlegrass
Nasella pulchra purple needlegrass
Piptatherum miliaceum smilo grass / millett ricegrass
Polypogon monspeliensis rabbit-foot grass
Schismus barbatus Mediterranean schismus
Vulpia myuros foxtail fescue

AMPHIBIANS
Batrachoseps nigriventris
black-bellied salamander
BUFONIDAE - TRUE TOADS
Bufo boreas halophilus
California toad
REPTILES
IGUANIDAE - IGUANID LIZARDS
Sceloporus occidentalis
western fence lizard
Uta stansburiana
side-blotched lizard
ANGUIDAE - ALLIGATOR LIZARDS
Elgaria multicarinata
southern alligator lizard
VIPERIDAE - VIPERS
Crotalus viridis
western rattlesnake
BIRDS
CATHARTIDAE - NEW WORLD VULTURES
Cathartes aura
turkey vulture
ACCIPITRIDAE - HAWKS
Buteo lineatus
red-shouldered hawk
Buteo jamaicensis
red-tailed hawk
FALCONIDAE - FALCONS
Falco sparverius
American kestrel
ODONTOPHORIDAE - QUAILS
Callipepla californica
California quail
CHARADRIIDAE - PLOVERS
Charadrius vociferus
killdeer
COLUMBIDAE - PIGEONS & DOVES
Columba livia
rock pigeon *
Zenaida macroura
mourning dove
CUCULIDAE - CUCKOOS & ROADRUNNERS
Geococcyx californianus
greater roadrunner
TROCHILIDAE - HUMMINGBIRDS
Calypte anna
Anna's hummingbird
PICIDAE - WOODPECKERS
Colaptes auratus
northern flicker
TYRANNIDAE - TYRANT FLYCATCHERS

Sayornis nigricans
black phoebe
Sayornis saya
Say's phoebe
CORVIDAE - JAYS & CROWS
Corvus brachyrhynchos
American crow
PARIDAE - TITMICE
Baeolophus inornatus
oak titmouse
AEGITHALIDAE - BUSHTITS
Psaltriparus minimus
bushtit
Thryomanes bewickii
Bewick's wren
TURIDIDAE - THRUSHES & ROBINS
Turdus migratorius
American robin
TIMALIIDAE - WRENTITS
Chamaea fasciata
wrentit
MIMIDAE - THRASHERS
Mimus polyglottos
northern mockingbird
STURNIDAE - STARLINGS
Sturnus vulgaris
European starling *
PARULIDAE - WARBLERS
Dendroica coronata
yellow-rumped warbler
Geothlypis trichas
common yellowthroat
EMBERIZIDAE - SPARROWS & JUNCOS
Pipilo maculatus
spotted towhee
Pipilo crissalis
California towhee
Melospiza melodia
song sparrow
Sturnella neglecta
western meadowlark
Quisicalus mexicanus
great-tailed grackle
FRINGILLIDAE - FINCHES
Carpodacus mexicanus
house finch
Carduelis psaltria
lesser goldfinch
PASSERIDAE - OLD WORLD SPARROWS
Passer domesticus
house sparrow *
MAMMALS

DIDELPHIDAE - NEW WORLD OPOSSUMS
Didelphis virginiana
Virginia opossum *
LEPORIDAE - HARES & RABBITS
Sylvilagus audubonii
desert cottontail
SCIURIDAE - SQUIRRELS
Spermophilus beecheyi
California ground squirrel
CANIDAE - WOLVES & FOXES
Canis latrans
coyote
PROCYONIDAE - RACCOONS
Procyon lotor
common raccoon
MUSTELIDAE - WEASELS, SKUNKS & OTTERS
Mephitis mephitis
striped skunk
CERVIDAE - DEERS
Odocoileus hemionus
mule deer