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SECTION ACRONYMS/ABBREVIATIONS

ACRONYM/ ABBREVIATION	DEFINITION
AFC	Application for Certification
BMPs	Best Management Practices
BO	Biological Opinion
CAISO	California Independent System Operator
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CFR	Code of Federal Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CNPS	California Native Plant Society
CNDDDB	California Natural Diversity Database
DPLU	San Diego County Department of Planning and Land Use
ESA	Endangered Species Act
FPUD	Fallbrook Public Utility District
HCP	Habitat Conservation Plan
HLP	Habitat Loss Permit
I	Interstate
Linear Facilities	Natural gas pipeline and underground transmission line collectively
LORS	Laws, Ordinances, Regulations and Standards
m	Meters
MSCP	Multiple Species Conservation Plan
MOU	Memorandum of Understanding
NCCP	Natural Communities Conservation Plan
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
Project	Subject of this AFC, Orange Grove Project
Project Site	Approximately 8.5 acre parcel to be leased for the power plant Site (a.k.a. "Site")
Region	Lands within a 10-mile radius of Project Site and Linear Facilities
SDG&E	San Diego Gas & Electric

ACRONYM/ ABBREVIATION	DEFINITION
Site	Approximately 8.5 acre parcel to be leased for the power plant Site (a.k.a. "Site")
Site Vicinity	The area within 1.0 mile of the Site and within 1,000 feet of Project linear facilities
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

6.6 BIOLOGICAL RESOURCES

This section describes the biological resources in the vicinity of the Project, evaluates the potential Project impacts, and identifies mitigation measures to address the potential Project impacts. A detailed Project description describing the facilities to be constructed and operated as part of the Orange Grove Project is included in Section 2.0, Generation Facility description, design and Operation.

The Site is located in north San Diego County, approximately 3.5 air miles northeast of Interstate (I) 15 on State Route (SR) 76, approximately 2.0 miles west of the community of Pala (Figures 2.2-1 and 2.2-2). The Site is situated within an approximately 202-acre property (the "Property") owned by San Diego Gas & Electric (SDG&E) (Figure 2.2-3). The Site is located off of Pala Del Norte Road, a private road accessed from SR 76, on disturbed lands formerly used as a citrus grove, but the grove has not been maintained in at least 5 years. Based on review of the available literature, biological resource agency databases, and field surveys, only three special-status species are known to occur within the Site or Project linear facilities. However, four other special-status species are known to occur immediately adjacent to the Project linear facilities.

The following section describes the existing and potential biological resources for the Project's regional area (i.e., lands within a 10-mile radius of the Project) and Project vicinity (i.e., area within 1.0 mile of the Site and within 1,000 feet of Project linear facilities).

6.6.1 Existing Conditions

A biological study of the Site and Project linear facilities was conducted by Karen D. Wilson, Paula Potenza, Ceri Williams-Dodd, Ph.D., and Valerie Walsh of TRC. Additional focused biological studies of the Site and Project linear facilities were conducted by Steve Montgomery of SJM Biological Consultants for Stephen's kangaroo rat, Ruben Ramirez of Cadre Environmental for arroyo toad, and Virginia Moran of Ecological Outreach Services for special-status plants. A detailed report of existing biological conditions is provided in the following sections.

6.6.1.1 Regional Overview

A regional overview of the lands within a 10-mile radius surrounding the Site and Project linear facilities was conducted to describe the range of environmental resources in the area. Lands within a 10-mile radius are referred to herein as the "region" (Figure 6.6-1). The Site is situated east of Monserate Mountain, north of the San Luis Rey River, west of the community of Pala and the Pala Indian Reservation, approximately 5 miles west of Cleveland National Forest, and approximately 5 miles south of Riverside County. The Site occurs on a very old alluvial fan surface that slopes southward at an approximately 10 percent grade. The alluvial fan surface is surrounded to the east, north, and west by steep slopes. The alluvial fan surface continues southward of the Site to SR 76. A former aggregate mine occurs in the San Luis Rey River bed on the south side of SR 76.

The region is primarily rural, including agriculture, large plot residential, small communities, open space, and large-scale commercial/industrial such as hotel/casino and mining operations. The Site is bounded to the north, west, and east by native coastal sage scrub and chaparral habitat. The Site is located between two normally dry upland drainages that are slightly to moderately incised into the alluvial fan surface. No concentrated surface drainages occur onsite. Further to the west, the Project is regionally bounded by Rice Canyon Road and I-15, which both run in a north to south direction. Just south of the Project Site are SR 76 (Pala Road) and the San Luis Rey River. Both SR 76 and the San Luis Rey River run in a generally east to west direction in this location. The sand and gravel in the riverbed are considered an important mineral resource and a large mine occurs just south of the Site. The Site is regionally bounded on the east by rural residential lands, Pala Indian Reservation, and the Indian-owned Pala Casino and Spa Resort.

Native vegetation communities in the region include Diegan coastal sage scrub, chaparral, southern riparian forest, and oak woodland communities. Native vegetation has been replaced over time in areas that have been disturbed. However, large areas of native vegetation remain intact within the region. Descriptions of the predominant existing vegetation communities and wildlife in the region are provided in the following section.

6.6.1.2 Regional Habitats

6.6.1.2.1 Natural Vegetation Communities

The closest natural vegetation communities are adjacent to the northern and western Site boundaries. Monserate Mountain, Mount Olympus, Gomez Creek, Rainbow Valley, Pala Indian Reservation, Cleveland National Forest, and areas to the north, west, and east support large expanses of creeks and valleys, surrounded by steep to very steep hillsides supporting coastal sage scrub and chaparral vegetation.

Diegan coastal sage scrub is a shrub and sub-shrub community usually occurring on gentle to moderate slopes and often dominated by coastal sagebrush (*Artemisia californica*) with co-dominants of California buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), California broom (*Lotus scoparius*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and laurel sumac (*Malosma laurina*).

Chaparral may be described as a woody and dense shrub community that often grows on steep to very steep hillsides. Native species found in chaparral communities include chamise (*Adenostoma fasciculata*), lemonadeberry (*Rhus integrifolia*), laurel sumac, and mission manzanita (*Xylococcus bicolor*).

South of the Site and SR 76 is the San Luis Rey River. The San Luis Rey River is a major river of San Diego County that meanders in an east to west direction and is a tributary to the Pacific Ocean. The river channel is mostly described as southern riparian forest habitat. This habitat community is densely vegetated and dominated by willow species such as arroyo willow (*Salix lasiolepis*) and black willow (*Salix gooddingii*).

6.6.1.2.2 General Agriculture

The southeastern-most portion of the region is primarily agricultural land used for pastures, agricultural facilities, citrus orchards, and avocado groves. Most pastures support non-native grasses and herbaceous weeds that are subject to frequent grazing and surface disturbance.

Orchards and groves in the region are typically open, single-species, tree-dominated habitats. The understory of orchards and groves is typically composed of non-native low-growing grasses and other herbaceous plants, but are managed to totally or partially prevent understory growth.

6.6.1.3 Regional Wildlife

6.6.1.3.1 Common Wildlife Species

Many species of native and non-native wildlife are known to inhabit the region. Bird species in the region include many types of songbirds, raptors, and wading birds. Typical bird species found within the region include American crow (*Corvus brachyrhynchos*), lesser goldfinch (*Carduelis psaltria*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), western kingbird (*Tyrannus verticalis*), and western scrub-jay (*Aphelocoma californica*). Other common wildlife species in the region include small and large mammals, reptiles, and amphibians such as California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), gopher snake (*Pituophis melanoleucus*), western fence lizard (*Sceloporus occidentalis*), bullfrog (*Rana catesbeiana*), and Pacific tree frog (*Hyla regilla*).

6.6.1.3.2 Special-status Species Potentially Occurring in the Region

The regional natural vegetation communities surrounding the Site provide habitat for wildlife and vegetation, including special-status species such as Stephen's kangaroo rat (*Dipodomys stephensi*), coastal California gnatcatcher (*Polioptila californica californica*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), yellow-breasted chat (*Icteria virens*), coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), golden eagle (*Aquila chrysaetos*), northern red diamond rattlesnake (*Crotalus ruber ruber*), San Diego horned lizard (*Phrynosoma coronatum blainvillii*), orange-throated whiptail (*Aspidoscelis hyperythra*), arroyo toad (*Bufo californicus*), rosy boa (*Charina trivirgata*), Parry's tetracoccus (*Tetracoccus dioicus*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), chaparral nolina (*Nolina interrata*), mesa horkelia (*Horkelia cuneata* ssp. *puberula*), felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*), and smooth tarplant (*Centromadia pungens* ssp. *laevis*) (see Figure 6.6-2). SR 76 to the south of the Site inhibits movement of terrestrial animals between the Site and the San Luis Rey River. Likewise, terrestrial animal movement from the Site to the west of I-15 is limited by the interstate. However, terrestrial movement between the Site and lands to the north and east are not limited by any major development or transportation corridor.

This section presents a list of special-status species that occur within the region based on records from the California Department of Fish and Game (CDFG) California Natural Diversity

Database (CNDDDB). In addition, it includes an assessment of whether each of these species that occur regionally is likely to occur on the Site, within 1.0 mile of the Site, or within 1,000 feet of the Project's linear facilities. Any species that is known to occur in the region with habitat needs similar to habitats present on or within 1.0 mile of the Site, or within 1,000 feet of Project linear facilities, was evaluated for its potential to occur in the Project vicinity (refer to Figure 6.6-3). Appendix 6.6-A includes the special-status species that occur within 1.0 mile of the reclaimed and freshwater pickup stations located near Mission Road in Fallbrook. These species are mostly coastal species and are not expected to occur near the Site or linear facilities. Special-status species include all species listed under the state and federal Endangered Species Acts (ESA), species that are proposed to be listed under the state and federal ESAs, California Species of Special Concern, Fully Protected Species under the California Fish and Game Code, and plant species listed in the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants of California*.

Special-status species database queries were conducted within a 10-mile radius of the Project and included the Bachelor Mountain, Bonsall, Boucher Hills, Fallbrook, Las Pulgas Canyon, Margarita Peak, Morro Hill, Murrieta, Pala, Pechanga, Rodriguez Mountain, San Luis Rey, San Marcos, Temecula, Valley Center, and Wildomar United States Geological Survey (USGS) 7.5-minute topographic quadrangles. Table 6.6-1 and Table 6.6-2 list the respective special-status species plants and wildlife that could potentially occur on or within 1.0 mile of the Site or within 1,000 feet of Project linear facilities. These lists are based on previously recorded occurrences documented in the CNDDDB. The following paragraphs describe regional special-status species that have a moderate or high potential to occur within 1.0 mile of the Site or within 1,000 feet of Project linear facilities.

Chaparral nolina (*Nolina cismontana*) is a native evergreen shrub in the lily family (Liliaceae) that blooms between May and June. This species is known to occur in chaparral and coastal sage scrub habitats at an elevation ranging from 140 to 1,275 meters (m) and is typically found on sandstone or gabbro soils. This species is threatened by development, agriculture, road construction, and recreational activities and is categorized as a CNPS List 1B.2 species, which means this species is rare, threatened, or endangered in California and elsewhere and is fairly threatened in California, with a moderate degree/immediacy of threat. This species is not federal or state listed. However, it is a List A plant (plants rare, threatened, or endangered in California and elsewhere) according to the County of San Diego Department of Planning and Land Use (DPLU) Sensitive Plant List. No individuals of chaparral nolina were observed on the Project site. However, CNDDDB records of this species were documented within the areas to the west, southwest, and south. This species has a high potential to occur within 1.0 mile of the Site or within 1,000 feet of Project linear facilities.

Engelmann oak (*Quercus engelmannii*) is a native medium-sized evergreen tree in the oak family (Fagaceae) that typically lives 50 to 150 years, with some living up to 350 years. This species' range has been reduced due to historic climate change and contemporary urban encroachment, so that scattered trees are now found only in the San Gabriel Mountains and throughout the Peninsular Ranges. Engelmann oak persists where rainfall is adequate, frosts rare, and summers relatively mild at an elevation ranging from 120 to 1,300 m. This species is a

CNPS List 4.2 species, which means this plant is of limited distribution (on a watch list) and is fairly threatened in California, with a moderate degree/immediacy of threat. Engelmann oak is not federal or state listed. However, it is a List D plant (plants of limited distribution and uncommon, but more information needed to determine their true rarity status) according to the DPLU Sensitive Plant List. One individual Engelmann oak and several saplings were observed within the Project disturbance area. This species was also observed within the drainage located just east of the Site.

Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*) is a native rhizomatous perennial herb in the mint family (Lamiaceae) that blooms between June and August. This subspecies is known to occur in chaparral and cismontane woodland habitats at an elevation ranging from 300 to 1,190 m. This subspecies is a CNPS List 1B.2 plant, which means this subspecies is rare, threatened, or endangered in California and elsewhere and is fairly threatened in California, with a moderate degree/immediacy of threat. This subspecies is not federal or state listed. However, it is a List A plant (plants rare, threatened, or endangered in California and elsewhere) according to the DPLU Sensitive Plant List. No individuals of felt-leaved monardella were observed on the Project site. However, CNDDDB records of this subspecies were documented approximately 0.90 mile to the east. This subspecies has a moderate potential to occur within 1.0 mile of the Site or within 1,000 feet of Project linear facilities.

Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) is a native perennial herb in the rose family (Rosaceae) that blooms between February and September. This subspecies is known to occur in chaparral, cismontane woodland, and coastal scrub habitats at an elevation ranging between 70 and 810 m and is typically found in sandy or gravelly soils. This subspecies is categorized as a CNPS List 1B.1 species, which means this subspecies is rare, threatened, or endangered in California and elsewhere and is seriously threatened in California, with a high degree/immediacy of threat. This subspecies is not federal or state listed. However, it is a List A plant (plants rare, threatened, or endangered in California and elsewhere) according to the DPLU Sensitive Plant List. No individuals of mesa horkelia were observed on the Project site. However, CNDDDB records of this subspecies were documented approximately 0.90 mile to the east. This subspecies has a moderate potential to occur within 1.0 mile of the Site or within 1,000 feet of Project linear facilities.

Parry's tetraococcus (*Tetraococcus dioicus*) is a native deciduous shrub in the spurge family (*Euphorbiaceae*) that blooms between April and May. This species is known to occur in chaparral and coastal sage scrub habitats at an elevation ranging from 165 to 1,000 m and is typically found in chaparral on gabbro and metavolcanic soils. This species is threatened by agriculture and development and is categorized as a CNPS List 1B.2 species, which means this species is rare, threatened, or endangered in California and elsewhere and is fairly threatened in California, with a moderate degree/immediacy of threat. This species is not federal or state listed. However, it is a List A plant (plants rare, threatened, or endangered in California and elsewhere) according to the DPLU Sensitive Plant List. Several stands (with small numbers of individuals) of Parry's tetraococcus were observed just inside the northern and eastern boundaries of the Site (Figure 6.6-4). It should be noted that the habitat that is occupied by these stands is

disturbed and these stands represent the southern extension of a more wide distribution of the species upslope of the Site in higher quality habitat.

Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*) is a native annual herb in the mustard family (Brassicaceae) that blooms between January and July. This taxon is known to occur in chaparral and coastal sage scrub habitats at an elevation ranging from 1 to 500 m. This taxon is categorized as a CNPS List 1B.2 species, which means this taxon is rare, threatened, or endangered in California and elsewhere and is fairly threatened in California, with a moderate degree/immediacy of threat. This taxon is not federal or state listed. However, it is a List A plant (plants rare, threatened, or endangered in California and elsewhere) according to the DPLU Sensitive Plant List. No individuals of Robinson's peppergrass were observed on the Project site. However, CNDDDB records of this species were documented approximately 0.45 mile to the northeast. This species has a moderate to high potential to occur within 1.0 mile of the Site or within 1,000 feet of Project linear facilities.

Dulzura pocket mouse (*Chaetodipus californicus femoralis*) is categorized as a California Species of Special Concern as defined by the CDFG and San Diego County Group 2 (overall population decreasing) species. This subspecies occurs in coastal sage scrub, chaparral, and grassland and is attracted to grass/chaparral edges. The Dulzura pocket mouse has a diet of seeds, insects, and sometimes green leaves. CNDDDB records of this subspecies were documented within 3 miles of the Project site. The Site does not support suitable habitat for the subspecies. However, the coastal sage scrub habitat within 1.0 mile of the Site and within and adjacent to the Project linear facilities may provide the necessary habitat components for occurrence of this subspecies.

San Diego desert woodrat (*Neotoma lepida intermedia*) is categorized as a CDFG California Species of Special Concern and San Diego County Group 2 (overall population decreasing) species. This subspecies prefers moderate to dense canopies and is abundant in areas of rocky outcrops, cliffs, and slopes. CNDDDB records document this subspecies within 3 miles of the Project site. A *Neotoma* sp. nest was observed at the base of an Engelmann oak located on the Project site during field surveys conducted on June 20, 2007, and additional woodrat nests have been observed in coastal sage scrub habitat surrounding the Site and within or near the Project linear facilities. It could not be determined if the nests were created by the dusky-footed woodrat (*Neotoma fuscipes*), which is a non-special-status species that could occur in the area, or were created by the San Diego desert woodrat. Surrounding areas within 1.0 mile of the Site or within 1,000 feet of Project linear facilities may provide suitable foraging and nesting conditions for this subspecies.

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Table 6.6-1 – Regional Special-Status Plant Species Potentially Occurring Within 1.0 Mile of the Project Site or Within 1,000 Feet of Linear Facilities

SPECIES	LISTING STATUS FEDERAL/ STATE ⁽¹⁾	CALIFORNIA NATIVE PLANT SOCIETY LIST CODE ⁽²⁾	COUNTY OF SAN DIEGO SENSITIVITY ⁽³⁾	FLOWERING/ PHENOLOGY	PRESENCE	HABITAT TYPE AND POTENTIAL FOR OCCURRENCE
Brewer's calandrinia (<i>Calandrinia breweri</i>)	None/None	4.2	List D	March to June	None Observed	Chaparral, coastal scrub. Prefers sandy/loamy soils. Occurs between 10 and 1,220 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.
California screw-moss (<i>Tortula californica</i>)	None/None	1B.2	---	Not Applicable	None Observed	Chenopod scrub, valley and foothill grassland. Prefers sandy soil. Occurs between 10 and 1,460 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
Chaparral nolina (<i>Nolina cismontana</i>)	None/None	1B.2	List A	May to July	None Observed	Chaparral, coastal scrub. Prefers sandstone or gabbro soils. Occurs between 140 and 1,275 m. CNDDDB records document occurrences within 1.0 mile of the Project impact area. High potential for occurrence.
Chaparral sand-verbena (<i>Abronia villosa</i> var. <i>aurita</i>)	None/None	1B.1	List A	January to September	None Observed	Chaparral, coastal scrub, desert dunes/sandy soils. Occurs between 80 and 1,600 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
Cooper's rein orchid (<i>Piperia cooperi</i>)	None/None	4.2	List D	March to June	None Observed	Chaparral, cismontane woodland, valley and foothill grassland. Occurs between 15 and 1,585 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.

SPECIES	LISTING STATUS FEDERAL/ STATE ⁽¹⁾	CALIFORNIA NATIVE PLANT SOCIETY LIST CODE ⁽²⁾	COUNTY OF SAN DIEGO SENSITIVITY ⁽³⁾	FLOWERING/ PHENOLOGY	PRESENCE	HABITAT TYPE AND POTENTIAL FOR OCCURRENCE
Engelmann oak (<i>Quercus engelmannii</i>)	None/None	4.2	List D	March to May	Observed	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Occurs between 120 and 1,300 m. One tree and several saplings observed within the Project disturbance area. Also observed just outside the eastern boundary of the Project Site.
Felt-leaved monardella (<i>Monardella hypoleuca</i> ssp. <i>lanata</i>)	None/None	1B.2	List A	June to August	None Observed	Chaparral, cismontane woodland. Occurs between 300 and 1,190 m. CNDDDB records document occurrences within 1.0 mile of the Project impact area. Moderate potential for occurrence.
Gander's ragwort (<i>Packera</i> [<i>Senecio</i>] <i>ganderi</i>)	None/SR	1B.2	List A	April to June	None Observed	Chaparral. Prefers burned areas and gabbroic outcrops. Occurs between 400 and 1,200 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
Graceful tarplant (<i>Holocarpha virgata</i> <i>elongata</i>)	None/None	4.2	List D	July to November	None Observed	Cismontane woodland, coastal scrub, valley and foothill grassland, and possibly chaparral. Occurs between 60 and 1,100 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.
Hall's monardella (<i>Monardella macrantha</i> ssp. <i>hallii</i>)	None/None	1B.3	List A	June to August	None Observed	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Occurs between 730 and 2,195 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
Jaeger's milk-vetch (<i>Astragalus pachypus</i> var. <i>jaegeri</i>)	None/None	1B.1	List A	December to June	None Observed	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Prefers sandy or rocky soils. Occurs between 365 and 915 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.

SPECIES	LISTING STATUS FEDERAL/ STATE ⁽¹⁾	CALIFORNIA NATIVE PLANT SOCIETY LIST CODE ⁽²⁾	COUNTY OF SAN DIEGO SENSITIVITY ⁽³⁾	FLOWERING/ PHENOLOGY	PRESENCE	HABITAT TYPE AND POTENTIAL FOR OCCURRENCE
Lakeside ceanothus (<i>Ceanothus cyaneus</i>)	None/None	1B.2	List A MSCP-NE	April to June	None Observed	Closed-cone coniferous forest, chaparral. Occurs between 580 and 1,065 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
Lewis sun cup (<i>Camissonia lewisii</i>)	None/None	3	List C	March to June	None Observed	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland. Occurs between 0 and 300 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.
Long-spined spineflower (<i>Chorizanthe polygonoides</i> var. <i>longispina</i>)	None/None	1B.2	List A	April to July	None Observed	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland. Often prefers clay soils. Occurs between 30 and 1,530 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
Mesa horkelia (<i>Horkelia cuneata</i> ssp. <i>puberula</i>)	None/None	1B.1	List A	February to July	None Observed	Chaparral, cismontane woodland, coastal scrub. Prefers sandy or gravelly soil. Occurs between 70 and 810 m. CNDDDB records document occurrences within 1.0 mile of the Project impact area. Moderate potential for occurrence.
Nevin's barberry (<i>Berberis nevinii</i>)	FE/SE	1B.1	List A MSCP-NE	March to June	None Observed	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Prefers sandy or rocky soils. Occurs between 295 and 825 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.

SPECIES	LISTING STATUS FEDERAL/ STATE ⁽¹⁾	CALIFORNIA NATIVE PLANT SOCIETY LIST CODE ⁽²⁾	COUNTY OF SAN DIEGO SENSITIVITY ⁽³⁾	FLOWERING/ PHENOLOGY	PRESENCE	HABITAT TYPE AND POTENTIAL FOR OCCURRENCE
Orcutt's brodiaea (<i>Brodiaea orcuttii</i>)	None/None	1B.1	List A	May to July	None Observed	Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools. Prefers clay soils, sometimes serpentine. Occurs between 30 and 1,692 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
Parry's tetraococcus (<i>Tetraococcus dioicus</i>)	None/None	1B.2	List A	April to May	Observed	Chaparral, coastal scrub. Occurs between 165 and 1,000 m. CNDDDB records document occurrences within 1.0 mile of the Project impact area. Observed within the Project disturbance area just east of the western drainage. Also observed just outside the northern and eastern boundaries of the Project site.
Rainbow manzanita (<i>Arctostaphylos rainbowensis</i>)	None/None	1B.1	List A	January to February	None Observed	Chaparral. Occurs between 225 and 640 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
Ramona horkelia (<i>Horkelia truncata</i>)	None/None	1B.3	List A	May to June	None Observed	Chaparral, cismontane woodland. Prefers clay soils. Occurs between 400 and 1,300 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
Robinson's peppergrass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)	None/None	1B.2	List A	January to July	None Observed	Chaparral and coastal scrub. Occurs between 1 and 885 m. CNDDDB records document occurrences within 1.0 mile of the Project impact area. Moderate to high potential for occurrence.

SPECIES	LISTING STATUS FEDERAL/ STATE ⁽¹⁾	CALIFORNIA NATIVE PLANT SOCIETY LIST CODE ⁽²⁾	COUNTY OF SAN DIEGO SENSITIVITY ⁽³⁾	FLOWERING/ PHENOLOGY	PRESENCE	HABITAT TYPE AND POTENTIAL FOR OCCURRENCE
San Diego adolphia (<i>Adolphia californica</i>)	None/None	2.1	List B	December to May	None Observed	Chaparral, coastal scrub, valley and foothill grassland. Occurs between 45 and 300 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.
San Diego ambrosia (<i>Ambrosia pumila</i>)	FE/ None	1B.1	List A MSCP-NE	April - October	None Observed	Chaparral, coastal scrub, valley and foothill grassland, vernal pools. Often located in disturbed areas. Occurs between 20 and 415 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
San Diego sunflower (<i>Hulsea californica</i>)	None/None	1B.3	List A	April to June	None Observed	Chaparral, lower montane coniferous forest, upper montane coniferous forest. Prefers openings and burned areas. Occurs between 915 and 2,915 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
San Diego thornmint (<i>Acanthomintha ilicifolia</i>)	FT/SE	1B.1	List A MSCP-NE	April to June	None Observed	Chaparral, coastal scrub, vernal pools, valley and foothill grassland. Prefers clay soils. Occurs between 10 and 935 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.
San Miguel savory (<i>Satureja chandleri</i>)	None/None	1B.2	List A	March to July	None Observed	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Prefers rocky, gabbroic or metavolcanic soils. Occurs between 120 and 1,075 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.

SPECIES	LISTING STATUS FEDERAL/ STATE ⁽¹⁾	CALIFORNIA NATIVE PLANT SOCIETY LIST CODE ⁽²⁾	COUNTY OF SAN DIEGO SENSITIVITY ⁽³⁾	FLOWERING/ PHENOLOGY	PRESENCE	HABITAT TYPE AND POTENTIAL FOR OCCURRENCE
Slender-horned spineflower (<i>Dodecahema leptoceras</i>)	FE/SE	1B.1	---	April to June	None Observed	Chaparral, cismontane woodland, coastal scrub (alluvial fan). Prefers sandy soil. Occurs between 200 and 760 m. CNDDDB records document occurrences within 10 miles of the Project impact area (in Riverside County). Has not been observed in San Diego County. Low potential for occurrence.
Small flowered microseris (<i>Microseris douglasii</i> var. <i>platycarpha</i>)	None/None	4.2	List D	March to May	None Observed	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools. Prefers clay soils. Occurs between 15 and 1,070 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.
Small flowered morning glory (<i>Convolvulus simulans</i>)	None/None	4.2	List D	March to July	None Observed	Chaparral, coastal scrub, valley and foothill grassland. Prefers clay and serpentinite seeps. Occurs between 30 and 700 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.
Southwestern spiny rush (<i>Juncus acutus</i> ssp. <i>leopoldii</i>)	None/None	4.2	List D	May to June	None Observed	Coastal dunes (mesic), meadows and seeps (alkaline seeps), marshes and swamps (coastal salt). Occurs between 3 and 900 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Project impact area lacks suitable habitat. No potential for occurrence.
Spreading navarretia (<i>Navarretia fossalis</i>)	FT/ None	1B.1	List A	April to June	None Observed	Chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools. Occurs between 30 and 1,300 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Project impact area lacks suitable habitat. No potential for occurrence.

SPECIES	LISTING STATUS FEDERAL/ STATE ⁽¹⁾	CALIFORNIA NATIVE PLANT SOCIETY LIST CODE ⁽²⁾	COUNTY OF SAN DIEGO SENSITIVITY ⁽³⁾	FLOWERING/ PHENOLOGY	PRESENCE	HABITAT TYPE AND POTENTIAL FOR OCCURRENCE
Sticky dudleya (<i>Dudleya viscida</i>)	None/None	1B.2	List A	May to June	None Observed	Coastal bluff scrub, chaparral, coastal scrub. Occurs between 10 and 550 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.
Summer holly (<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>)	None/None	1B.2	List A	April to June	None Observed	Chaparral, cismontane woodland. Occurs between 30 and 550 m. CNDDDB records document occurrences within 10 miles of the Project impact area. Low potential for occurrence.
Palmer's goldenbush (<i>Ericameria palmeri</i> ssp. <i>palmeri</i>)	None/None	2.2	List B MSCP-NE	July to November	None Observed	Chaparral, coastal scrub. Prefers mesic soils. Occurs between 30 and 600 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.
Thread leaved brodiaea (<i>Brodiaea filifolia</i>)	FT/SE	1B.1	List A	March to June	None observed	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Often prefers clay soils. Occurs between 40 and 1,220 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.
Vail Lake ceanothus (<i>Ceanothus ophiochilus</i>)	FT/SE	1B.1	---	February to March	None Observed	Chaparral (gabbroic or pyroxenite-rich outcrops). Occurs between 580 and 1,065 m. CNDDDB records document occurrences within 10 miles of the Project impact area (in Riverside County). Has not been observed in San Diego County. Low potential for occurrence.
Western dichondra (<i>Dichondra occidentalis</i>)	None/None	4.2	List D	March to July	None Observed	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Occurs between 50 and 500 m. No CNDDDB occurrences documented within 10 miles of the Project impact area. Low potential for occurrence.

- (1) United States Fish and Wildlife Service (USFWS)
 - FE - Federally listed, endangered: species in danger of extinction throughout a significant portion of its range
 - FT - Federally listed, threatened: species likely to become endangered within the foreseeable futureState of California
 - SE - State listed, endangered
 - SR - State listed, rare
- (2) California Native Plant Society
 - List 1B - Rare, threatened, or endangered in California and elsewhere
 - List 2 - Rare, threatened, or endangered in California but more common elsewhere
 - List 3 - Plants which need more information
 - List 4 - Limited distribution – a watch list
 - 0.1 - Seriously threatened in California (high degree/immediacy of threat)
 - 0.2 - Fairly threatened in California (moderate degree/immediacy of threat)
 - 0.3 - Not very threatened in California (low degree/immediacy of threats or no current threats known)
- (3) San Diego County
 - List A - Plants rare, threatened or endangered in California and elsewhere
 - List B - Plants rare, threatened or endangered in California but more common elsewhere
 - List C - Plants which may be quite rare, but need more information to determine their true rarity status
 - List D - Plants of limited distribution and are uncommon, but need more information to determine their true rarity status
 - MSCP-NE - Multiple Species Conservation Program – narrow endemic. A narrow endemic is a species that is confined to a specific geographic region, soil type, and/or habitat

Table 6.6-2 – Regional Special-Status Wildlife Species Potentially Occurring Within 1.0 Mile of the Project Site or Within 1,000 Feet of Linear Facilities

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
<i>Mammals</i>		
American badger (<i>Taxidea taxus</i>)	CSC Group 2	Low. CNDDDB records document one occurrence of this species in San Marcos, California, approximately 11-miles from the Project impact area. This species is most abundant in drier, open stages of mostly shrub, forest, and herbaceous habitats with friable soils.
Big free-tailed bat (<i>Nyctinomops macrotis</i>)	CSC Group 2	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. <i>N. macrotis</i> is a migratory species that travels seasonally from Mexico to the southwestern United States. This species inhabits rugged and rocky terrain and prefers rocky cliffs in weathered rock fissures and crevices. It has also been discovered roosting in buildings and in terrestrial plants including ponderosa pine, Douglas-fir, and desert shrubs. In San Diego County, the main range of <i>N. macrotis</i> is limited to the coastal region.
California leaf-nosed bat (<i>Macrotus californicus</i>)	CSC Group 2	None. The Project impact area lacks suitable habitat, but the range of <i>M. californicus</i> does overlap the Project area. No CNDDDB occurrences documented within 10 miles of the Project impact area. However, the bats are most sensitive during the daylight hours when they roost. However; the Project impact area lacks suitable roosting habitats such as caves and mine shafts.
Dulzura pocket mouse (<i>Chaetodipus californicus femoralis</i>)	CSC Group 2	Moderate. CNDDDB records document three occurrences of this subspecies within 10 miles from the Project impact area, including one occurrence within 3 miles of the Project impact area. This subspecies occurs in coastal sage scrub, chaparral, and grassland and is attracted to grass/chaparral edges.
Los Angeles pocket mouse (<i>Perognathus longimembris brevinasus</i>)	CSC Group 2	Low. CNDDDB records document one occurrence of this subspecies approximately 7.7 miles from the Project impact area. This subspecies is typically found in lower elevation grasslands and coastal sage communities in the Los Angeles Basin. Prefers open ground with fine, sandy soils.
Mexican long-tongued bat (<i>Choeronycteris mexicana</i>)	CSC Group 2	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. <i>C. mexicana</i> lives in a variety of habitats ranging from desert, montane, riparian, to pinyon-juniper habitats. The bats are most frequently found roosting in desert canyons, deep caves, mines, or rock crevices. In urban environments the bats use abandoned buildings for day roosts. Abandoned buildings and structures are located along the Project linear corridor.
Mountain lion (<i>Felis concolor</i>)	Group 2	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species occurs in many different habitats owing to its large range. It typically inhabits remote mountainous areas near reliable water sources. In addition, it is mainly a nocturnal animal and typically avoids contact with humans.

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
Northwestern San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)	CSC Group 2	Low. CNDDDB records document four occurrences of this subspecies within 10 miles from the Project impact area, including one occurrence within 7 miles of the Project impact area. This subspecies occurs in coastal sage scrub, chaparral, grassland, and sagebrush in western San Diego County. Prefers sandy, herbaceous areas, usually in association with rock or gravel.
Pallid bat (<i>Antrozous pallidus</i>)	CSC Group 2	Low. CNDDDB records document one occurrence of this species approximately 7.5 miles from the Project impact area. This species is known to occur in deserts, grasslands, shrublands, woodlands, and forests. Most commonly found in open, dry habitats with rocky areas for roosting.
Pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	CSC Group 2	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species is an inhabitant of semiarid desert lands. It has been found using day-roosts in caves, crevices in cliffs, and under the roof tiles of buildings. Records indicate that <i>N. femorosaccus</i> distribution within California is patchy and it is mainly observed in the arid lowlands.
Ringtail (<i>Bassariscus astutus</i>)	SFP Group 2	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. <i>B. astutus</i> inhabits mainly rocky areas of chaparral and coastal scrub. There is some suitable habitat within the Project area, but lack of documented sightings in the Project area suggests that potential occurrence is low.
San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	CSC Group 2	Low. CNDDDB records document one occurrence of this subspecies approximately 7.5 miles from the Project impact area. This subspecies is typically known to occur in intermediate canopy stages of shrub habitats and in open shrub/herbaceous and tree/herbaceous edges.
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	CSC Group 2	Moderate. Two <i>Neotoma</i> sp. nests were observed in the Project impact area. However, the dusky-footed woodrat (<i>Neotoma fuscipes</i>) could also occur in the Project area. In addition, CNDDDB records document two occurrences of this species within 10 miles of the Project impact area, including one occurrence within 3 miles of the Project impact area. This species prefers moderate to dense canopies and is particularly abundant in areas of rocky outcrops, cliffs, and slopes.
Small-footed myotis (<i>Myotis ciliolabrum</i>)	Group 2	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. <i>M. ciliolabrum</i> roosts in small caves and mine shafts in the arid lowlands of southern California.
Spotted bat (<i>Euderma maculatum</i>)	CSC Group 2	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species inhabits the semi-arid regions of the western United States and northern Mexico, is nocturnal, and roosts in caves and mine shafts.
Southern grasshopper mouse (<i>Onychomys torridus ramona</i>)	CSC Group 2	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. <i>O. torridus ramona</i> inhabits coastal sage scrub and other grassland habitats and is primarily nocturnal. Although suitable habitat is present, lack of documented sightings suggests that potential occurrence is low.

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
Southern mule deer (<i>Odocoileus hemionus</i>)	Group 2	Moderate. No CNDDDB occurrences documented within 10 miles of the Project impact area. <i>O. hemionus</i> inhabits several types of habitat, including coniferous forest, desert shrub, chaparral, and grassland with shrubs. There is sufficient suitable habitat surrounding the Project impact area, suggesting that potential occurrence is moderate.
Stephen's kangaroo rat (<i>Dipodomys stephensi</i>)	FE ST Group 1	Low. CNDDDB records document 12 occurrences of this species within 10 miles of the Project impact area, including one occurrence within 6 miles of the Project impact area. This species is found primarily in annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grasses, and filaree. This species will burrow into firm soil.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	CSC Group 2	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. Townsend's big-eared bats occur in a variety of habitats, including coastal conifer and broad-leaf forests, oak and conifer woodlands, arid grasslands and deserts, and high-elevation forests and meadows. This species is nocturnal and roosts in caves and dark and abandoned man-made structures.
Western mastiff bat (<i>Eumops perotis californicus</i>)	CSC Group 2	Low. CNDDDB records document two occurrences of this subspecies within 10 miles from the Project impact area, including one occurrence within 7 miles of the Project impact area. Observed in 1996 on the north rim of Moosa Canyon, approximately 7 miles from the Project impact area. This subspecies prefers open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices, cliff faces, high buildings, trees, and tunnels.
Western red bat (<i>Lasiurus blossevillii</i>)	CSC Group 2	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species prefers to roost in broad leaved trees, especially cottonwoods and willows in the foothills and lower mountains of the southwest and in fruit and nut orchards of the west, where they resemble dried leaves when they are curled up and asleep. It is often found near streams.
Western yellow bat (<i>Lasiurus xanthinus</i>)		None. The Project impact area lacks suitable habitat for this species. CNDDDB records document one occurrence of this species approximately 11.5 miles from the Project impact area. This species is known to occur in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Often roosts in trees, particularly palms. Forages over water and among trees.
Yuma myotis (<i>Myotis yumanensis</i>)	Group 2	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species is known to occur in various woodland and grassland habitats. In addition, they require caves or other undisturbed refugia in order to roost.
Birds		
Bell's sage sparrow (<i>Amphispiza belli belli</i>)	CSC BCC Group 1	None. The Project impact area lacks suitable habitat. CNDDDB records document two occurrences of this subspecies within 10 miles of the Project impact area, including one occurrence in Moosa Canyon, located approximately 7.5 miles south of the Project impact area. This subspecies nests in chaparral consisting of relatively dense stands of chamise.

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
White-tailed kite (<i>Elanus leucurus</i>), formerly known as black shouldered kite (<i>Elanus caeruleus</i>)	SFP Group 1	Moderate. No CNDDDB occurrences documented within 10 miles of the Project impact area. However, this species is widespread across California occurring in most non-desert lowland terrestrial habitats (particularly riparian woodlands, and oak or sycamore groves near grasslands).
California gull (non- breeding) (<i>Larus californicus</i>)	Group 2	None. The Project impact area lacks suitable habitat. This species overwinters on farmland and along the Pacific coast from southern Washington to Guatemala. During the summer, <i>L. californicus</i> inhabits marshes, freshwater lakes, and rivers. The species breeds and nests at Mono Lake and is threatened there by habitat loss.
California horned lark (<i>Eremophila alpestris actia</i>)	CSC Group 2	Low. CNDDDB records document one occurrence of this subspecies approximately 10 miles north of the Project impact area. This subspecies is known to occur in coastal regions, short-grass prairie, “bald” hills, mountain meadows, open coastal plains, fallow grain fields, and alkali flats.
Coastal (San Diego) cactus wren (<i>Campylorhynchus brunneicapillus sandiegensis</i>)	CSC BCC Group 1	Moderate. CNDDDB records from 1990 to 2000 document multiple sightings of this species within 10 miles of the Project impact area, including one occurrence that slightly overlaps the northeastern corner of the Project impact area. This species is typically found in coastal sage scrub where large patches of cactus are present for nesting and roosting. A medium-sized patch of prickly pear cactus (<i>Opuntia</i> sp.) was observed west of the Project site where the Project linear corridor is proposed. No individuals were observed during field surveys or during a December 5, 2007 Project site habitat assessment for this subspecies, which reports that the closest stand of cactus to the Project site is located approximately 700 feet east of the Project impact area, immediately adjacent to SR 76.
Coastal California gnatcatcher (<i>Polioptila californica californica</i>)	FT CSC Group 1	High. Focused non-breeding and breeding seasons protocol-level surveys for this subspecies have been conducted on the Project impact area and up to 500 feet from the Project impact area boundaries to determine presence (final surveys and report pending). Two individuals of this species were observed during the December 21, 2007 survey along the Project linear corridor, which extends along SR 76 from the Pala substation west of the Project impact area west to Rice Canyon Road. CNDDDB records document multiple sightings of this species within 10 miles of the Project impact area, including occurrences within 3 miles of the Project impact area. This species is an obligate, permanent resident of coastal sage scrub below 2,500 feet in southern California. This species is known to occur in low, coastal sage scrub in arid washes, and on mesas and slopes.
Common barn-owl (<i>Tyto alba</i>)	Group 2	Moderate. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species is nocturnal and occurs in almost all lowland habitats and roosts in tree hollows. Palms, other dense trees, and quiet man-made structures. There are abandoned buildings and structures within and adjacent to the Project linear corridor west of the Project site.

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
Cooper's hawk (<i>Accipiter cooperii</i>)	CSC Group 1	High. The Project impact area provides suitable nesting habitat within and near the Project linear corridor where it parallels SR 76. Cooper's hawk was observed foraging within the Project area during the coastal California gnatcatcher surveys for the Project. CNDDDB records document three occurrences of this species within 10 miles of the Project impact area, including one occurrence within 2.5 miles of the Project impact area. Nest and fledglings were observed in 1991 and 2000 near Trujillo Creek, approximately 4 miles from Project impact area. This species traditionally nests in open woodlands or in deciduous trees in riparian areas, but is well documented in San Diego County nesting in eucalyptus trees and other non-native planted trees.
Golden eagle (<i>Aquila chrysaetos</i>)	CSC SFP BCC Group 1	Low. The Project impact area lacks suitable nesting habitat and no individuals of this species were observed during field surveys. However, a CNDDDB record from 2000 documents a golden eagle nest approximately 1.0 mile west of Pala in deciduous woodland. The Project impact area provides suitable foraging habitat. This species' nesting and wintering habitats include rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons, rocky outcrops, and large trees provide nesting habitat.
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	Group 1	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. However, this species occurs in grassland habitats like that present in the Project area. They are a ground nesting species that migrates into California in February or March and departs the area in late summer.
Green heron (<i>Butorides striatus</i>)	Group 2	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. However, there is suitable riparian woodland habitat for this species along portions of the Project linear corridor where it borders the riparian corridor along the San Luis Rey River. This species occurs in freshwater ponds or channels or brackish marshes with wooded cover.
Great blue heron (<i>Ardea herodias</i>)	Group 2	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species occurs near sources of water, including rivers, lake edges, marshes, saltwater seacoasts, and swamps. They usually nest in trees or bushes that stand near water, breeding at elevations of up to 1,500 m.
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	FE SE BCC Group 1	Moderate. There is suitable riparian woodland habitat for this subspecies near portions of the Project linear corridor where it borders the riparian corridor along the San Luis Rey River. Least Bell's vireo presence surveys have been conducted in suitable habitat along the Project linear corridor (final surveys and report pending). CNDDDB records document multiple occurrences of this subspecies within 10 miles of the Project impact area, including one occurrence within 0.2 mile of the Project impact area along the San Luis Rey River. This subspecies is typically found foraging and nesting in low riparian areas in the vicinity of water or in dry river bottoms, below 2,000 feet in elevation. Nests are often found in willow, baccharis, or mesquite.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	CSC BCC Group 1	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species occurs in grasslands and open fields, often in an agricultural setting. It prefers fields with hedgerows or other shrub cover to use as perches.

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
Long-eared owl (<i>Asio otus</i>)	CSC Group 1	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. This is a rare species that occurs mainly in riparian lowland areas with dense vegetative cover for roosting and nesting.
Merlin (winter) (<i>Falco columbarius</i>)	CSC Group 2	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species occurs in California as a wintering species in chaparral, grassland, coastal, and marshland habitats.
Northern harrier (<i>Circus cyaneus hudsonius</i>)	CSC Group 1	Low. CNDDDB records document one occurrence of this species 9 miles north of the Project impact area. Northern harrier was observed foraging in the vicinity of the Project, but the Project lacks suitable nesting habitat. This species' nesting habitat is typically associated with coastal salt and freshwater marsh, but it will also nest in grasslands and grain fields. Nests on ground in shrubby vegetation, usually at marsh edge. Foraging habitat generally consists of various low marsh and grassland habitats.
Prairie falcon (<i>Falco mexicanus</i>)	CSC BCC Group 1	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species occurs in grassland, chaparral, coastal dune, and agricultural habitats. It nests on ledges and forages in surrounding open habitats.
Red-shouldered hawk (<i>Buteo lineatus</i>)	Group 1	Moderate. No CNDDDB occurrences documented within 10 miles of the Project impact area. However, there is suitable riparian woodland habitat for this species along portions of the Project linear corridor where it borders the riparian corridor along the San Luis Rey River. Red-shouldered hawk has been observed within 1.0 mile of the Project site during coastal California gnatcatcher surveys for this Project. This species occurs mainly in woodland and forest habitats. They use the same nesting site from year to year.
Sharp-shinned hawk (<i>Accipiter striatus</i>)	CSC Group 1	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species nests in conifer and aspen forests. In addition, it is known to frequent suburbs and agricultural areas where it feeds on birds that use nearby bird feeders. This species is an uncommon winter visitor to San Diego County and there is no evidence of breeding by this species in San Diego County.
Southern California rufous-crowned sparrow (<i>Aimophila ruficeps canescens</i>)	CSC Group 1	High. CNDDDB records document 10 occurrences of this subspecies within 10 miles of the Project impact area, including three occurrences within 3 miles of the Project impact area. Coastal sage scrub habitat suitable for this subspecies is located on the Project linear corridor east of the Project site and it has been observed during the coastal California gnatcatcher surveys for this Project. This species typically inhabits coastal sage scrub and sparse mixed chaparral, often on rocky hillsides with patches of grass and herbaceous vegetation.

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	FE SE Group 1	Moderate. CNDDDB records document six occurrences of this subspecies within 10 miles of the Project impact area, including one occurrence within 2 miles of the Project impact area. All occurrences are located southeast and southwest of the Project impact area along the San Luis Rey River. There is suitable riparian woodland habitat for this subspecies along portions of the Project linear corridor where it borders the riparian corridor along the San Luis Rey River. Southwestern willow flycatcher presence surveys have been conducted in suitable habitat along the Project linear corridor (final surveys and report pending). This subspecies uses cottonwood-willow riparian forest for foraging and nesting.
Tricolored blackbird (<i>Agelaius tricolor</i>)	CSC BCC Group 1	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species occurs in grassland, riparian, and marsh habitats. It requires thick vegetation for nesting purposes and often nests near sources of water. It forages mainly in surrounding agricultural fields and grasslands up to 3 miles from the nesting colony.
Turkey vulture (<i>Cathartes aura</i>)	Group 1	Low. Though this species was observed flying over the Project impact area, there is no appropriate nesting habitat for this species on the Project site. No CNDDDB occurrences have been documented within 10 miles of the Project impact area. <i>C. aura</i> is commonly observed in open country, woodlands, and farms.
Western bluebird (<i>Sialia mexicana</i>)	Group 2	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species occurs on the edge of conifer forests and is most abundant in areas that have been recently cleared or burned.
Western burrowing owl (<i>Athene cunicularia hypuagea</i>)	CSC BCC Group 1	Low. CNDDDB records document three occurrences of this subspecies within 10 miles of the Project impact area, including an occurrence within 8 miles of the Project impact area. No individuals of this subspecies, or its burrows, castings, or other signs were observed during the field surveys. This subspecies typically utilizes burrows constructed by burrowing mammals that are found in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	FC SE BCC Group 1	Low. CNDDDB records document this subspecies within 8 miles of the Project impact area on the Santa Margarita River. There is marginally suitable riparian woodland habitat for this subspecies along portions of the Project linear corridor where it borders the riparian corridor along the San Luis Rey River. This species typically inhabits old growth willow-cottonwood riparian forests along the broad lower flood bottoms of larger river systems.
Yellow warbler (<i>Dendroica petechia brewsteri</i>)	CSC Group 2	Moderate. CNDDDB records document three occurrences of this subspecies within 10 miles of the Project impact area, including an occurrence within 3.5 miles of the Project impact area along the San Luis Rey River. There is suitable riparian woodland habitat for this subspecies along portions of the Project linear corridor where it borders the riparian corridor along the San Luis Rey River. This subspecies nests in various riparian vegetation communities. Prefers willow, cottonwood, aspen, sycamore, and alders for nesting and foraging, but will also nest in montane shrubbery in open conifer forests.

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
Yellow-breasted chat (<i>Icteria virens</i>)	CSC Group 1	Moderate. There is suitable riparian woodland habitat for this species along portions of the Project linear corridor where it borders the riparian corridor along the San Luis Rey River. CNDDDB records document five occurrences of this species within 10 miles of the Project impact area, including an occurrence within 0.4 mile of the Project impact area along the San Luis Rey River. This species typically inhabits dense, riparian thickets of willow and other brushy vegetation near watercourses. Nesting occurs in low, dense riparian areas.
Reptile/Amphibians		
Arroyo toad (<i>Bufo californicus</i>)	FE CSC Group 1	Moderate. CNDDDB records document nine occurrences of this species within 10 miles of the Project impact area, including an occurrence within 0.4 mile of the Project impact area along the San Luis Rey River. This species is typically found near washes or intermittent streams, including valley-foothill and desert washes. Prefers rivers with sandy banks, willows, cottonwoods, and sycamores and loose, gravelly areas of streams in the drier parts of its range. <i>B. californicus</i> breeds in shallow, open sandy and gravelly streams and lives in a variety of upland habitats associated with loose sandy soils for burrowing. The Project impact area does not support suitable breeding habitat for the species. However, suitable aestivation habitat occurs near portions of the Project linear corridor where it borders the riparian corridor along the San Luis Rey River. Other areas south of SR 76 near portions of the Project linear corridor are not suitable aestivation habitat, but may be used during foraging and movement to suitable aestivation habitat.
California red-legged frog (<i>Rana aurora draytoni</i>)	FT CSC Group 1	None. Project impact area does not support suitable riparian habitat or surface water. No CNDDDB occurrences documented within 10 miles of the Project impact area. This subspecies is typically found close to the water's edge along freshwater water bodies in California. It typically spends the dry season in burrows, emerging in the winter or early spring to breed at nearby waterbodies. The presence of the non-native bullfrog often precludes the presence of California red-legged frog.
San Diego horned lizard (<i>Phrynosoma coronatum blainvillii</i>)	CSC Group 2	High. CNDDDB records document 12 occurrences of this subspecies within 10 miles of the Project impact area, including an occurrence within 3.5 miles of the Project impact area. Furthermore, the subspecies was recorded in the Project linear corridor west of the Site during special-status plant surveys. This species inhabits coastal sage scrub and chaparral in arid and semi-arid areas. Prefers friable, rocky, or shallow sandy soils.
Coast patch-nosed snake (<i>Salvadora hexalepis virgultea</i>)	CSC Group 2	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. This subspecies occurs in scrubland habitat such as chaparral and coastal sage scrub habitats. Suitable habitat for this subspecies is linked to the habitat of its prey, the whiptail lizard. Both species require significant shrub density.
Coastal western whiptail (<i>Aspidoscelis tigris stejnegeri</i>) (formerly <i>Cnemidophorus tigris multiscutatus</i>)	Group 2	Low. CNDDDB records document five occurrences of this subspecies within 10 miles of the Project impact area, including an occurrence within 8 miles of the Project impact area. This subspecies is found in deserts and semiarid areas with sparse vegetation and open areas. Also found in woodland and riparian areas.

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
Coronado skink (<i>Eumeces skiltonianus interparietalis</i>)	CSC Group 2	Low. CNDDDB records document four occurrences of this subspecies within 10 miles of the Project impact area, including an occurrence within 3 miles of the Project impact area. This subspecies is typically found in grassland, chaparral, pinyon-juniper and sage woodland, and pine-oak and pine forests in the Coastal Ranges of southern California. Prefers early successional stages or open areas. Found in rocky areas close to streams and on dry hillsides.
Northern red diamond rattlesnake (<i>Crotalus ruber ruber</i>)	CSC Group 2	High. This subspecies was not observed within the Project impact area during field surveys. However it was observed immediately outside the western boundary of the Project site. CNDDDB records document five occurrences of this subspecies within 10 miles of the Project impact area, including an occurrence within 3 miles of the Project impact area. This subspecies is typically found in chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. This subspecies prefers rocky areas and dense vegetation and requires rodent burrows, cracks in rocks or other surface cover for refuge.
Orange-throated whiptail (<i>Aspidoscelis hyperythra</i>) (formerly <i>Cnemidophorus hyperythrus</i>)	CSC Group 2	High. CNDDDB records document multiple occurrences of this species within 10 miles of the Project impact area, including an occurrence within 0.7 miles of the Project impact area. Records from 2000 document sightings of this species within 2 miles of the Project impact area in open disturbed coastal sage scrub near fallow agricultural fields. This species is typically found in coastal sage scrub, chaparral, and valley-foothill hardwood habitats. Prefers sandy areas with patches of brush and rocks.
Coastal rosy boa (<i>Charina trivirgata roseofusca</i>)	Group 2	Low. CNDDDB records document three occurrences of this subspecies within 10 miles of the Project impact area, including an occurrence within 4.5 miles of the Project impact area. The Project impact area lacks suitable habitat for this subspecies. However, suitable habitat may be found within and adjacent to the Project linear facilities. This subspecies is typically found in desert and chaparral from the coast to the Mojave and Colorado deserts. Prefers moderate to dense vegetation and rocky cover. Suitable habitats include a mix of brushy cover and large rocks typically on hillsides, in desert canyons or washes and in the mountains.
San Diego banded gecko (<i>Coleonyx variegatus abbottii</i>)	Group 1	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. This subspecies occurs in arid areas including creosote flats, sagebrush desert, pinyon-juniper woods, and chaparral. Prefers rocky areas, but may occur in rock-free areas such as sand dunes.
San Diego ringneck snake (<i>Diadophis punctatus similis</i>)	Group 2	Low. CNDDDB records document one occurrence of this subspecies approximately 12 miles northwest of the Project impact area. This subspecies prefers open, fairly rocky areas with surface litter or herbaceous vegetation. Often found in moist areas near intermittent streams.
South Coast garter snake (<i>Thamnophis sirtalis novum</i>)	CSC Group 2	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. <i>T. novum</i> occurs in marsh and upland habitats near permanent water that supports substantial stands of riparian vegetation.

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
Southwestern pond turtle (<i>Clemmys marmorata pallida</i>)	Group 1	None. The Project impact area lacks suitable habitat for this subspecies. No CNDDDB occurrences documented within 10 miles of the Project impact area. The subspecies occurs in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with abundant vegetation and either rocky or muddy bottoms (in woodland, forest, and grassland). It prefers pools to shallower areas when found in streams. Logs, rocks, cattail mats, and exposed banks are required for basking.
Silvery legless lizard (<i>Anniella pulchra pulchra</i>)	CSC Group 2	None. The Project impact area lacks suitable habitat. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species occurs in moist warm loose soil with plant cover. Moisture is essential. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.
Two-striped garter snake (<i>Thamnophis hammondii</i>)	CSC Group 1	None. The Project impact area lacks suitable habitat. CNDDDB records document one occurrence of this species approximately 7.5 miles northwest of the Project impact area. This species is found in coastal California up to 7,000 feet in elevation in or near permanent fresh water. Prefers streams with rocky beds and substantial stands of riparian vegetation.
Western spadefoot (<i>Spea hammondii</i>) (formerly <i>Scaphiopus hammondii</i>)	CSC Group 2	Low. CNDDDB records document five occurrences of this species within 10 miles of the Project impact area, including one occurrence within 7.5 miles of the Project impact area. This species occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools or other seasonal wetlands are essential for breeding and egg-laying.
<i>Invertebrates/Fish</i>		
Arroyo chub (<i>Gila orcuttii</i>)	CSC Group 1	None. The Project impact area lacks suitable habitat. CNDDDB records document four occurrences of this species along the Santa Margarita River, approximately 6 miles to the north of the Project impact area. This species is found in slow water stream sections with mud or sand bottoms.
<i>Terrestrial Insects</i>		
Hermes copper (<i>Lycaena hermes</i>)	Group 1	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species occurs in association with spiny redberry, the larval food plant. Adults nectar on tall flowering plants, especially California buckwheat. The host plant species are located in chaparral and coastal sage scrub habitats.
Monarch butterfly (<i>Danaus plexippus</i>)	Group 2	Low. No CNDDDB occurrences documented within 10 miles of the Project impact area. This species is wide ranging and its habitat needs are dictated largely by the presence of milkweed, the larval food plant. Winter roosts are an important resource to this species that is subject to disturbance from human activities. However, no roosts occur away from the coast. Consequently, no roosts would occur within the Project impact area.

COMMON NAME/ SCIENTIFIC NAME	LISTING STATUS ⁽¹⁾	POTENTIAL FOR SPECIES OCCURRENCE WITHIN THE PROJECT IMPACT AREA
Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	FE Group 1	None. The Project impact area lacks suitable habitat for this subspecies. However, plantain (<i>Plantago erecta</i>), a larval food plant for this butterfly, was observed during the February 2008 biological survey for the Project linear facilities and during focused surveys for coastal California gnatcatcher. CNDDDB records document one occurrence of this subspecies approximately 9.5 miles north of the Project impact area. This subspecies is found in sunny openings within chaparral and coastal sage shrub, grasslands, and vernal pools, often along ridgelines and hilltops in parts of Riverside and San Diego counties. The primary larval food plants for this subspecies are <i>Plantago erecta</i> , <i>P. patagonica</i> , and <i>Castilleja exserta</i> . Focused surveys were completed for the subspecies and it was not detected on the Project site.

(1) California Department of Fish and Game

SE - State listed, endangered

ST - State listed, threatened

CSC - California species of special concern

SFP - State designated, fully protected U.S. Fish and Wildlife Service

FE - Federally listed, endangered

FT - Federally listed, threatened

FC - Federal candidate species (former Category 1 candidates)

BCC - U.S. Fish and Wildlife Service Bird of Conservation Concern

San Diego County

Group 1 - Species has a very high level of sensitivity, either because it is listed as threatened or endangered or it has very specific natural history requirements.

Group 2 - Species becoming less common, but not so rare that extirpation or extinction is imminent. Species tends to be prolific within suitable habitat types.

Southern mule deer (*Odocoileus hemionus fuliginatus*) is designated as a San Diego County Group 2 (overall population decreasing) species. This subspecies can be found in a variety of habitats including coniferous forest, desert shrubs, coastal shrubs, chaparral, and grasslands with shrubs. Although no individuals or sign of this subspecies were observed during the field surveys conducted on March 14 and June 20, 2007 and February 12, 2008, there is sufficient suitable habitat surrounding the Site and within the Project linear corridor to support individuals of the subspecies. Therefore, the subspecies has the potential to occur in the Project area.

White-tailed kite (*Elanus leucurus*) is a CDFG designated Fully Protected Species and San Diego County Group 1 (very high level of sensitivity) species. No CNDDDB occurrences were documented for this species within 10 miles of the Project site. However, this species is widespread across California in non-desert lowland terrestrial habitats, in particular, riparian woodlands and oak or sycamore groves near grasslands. There is potential nesting and foraging habitat within and along the Project linear facilities for this species.

Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) is categorized as a CDFG California Species of Special Concern and San Diego County Group 1 (very high level of sensitivity) species. Cactus wrens are found year-round in southern California, in extensive cactus thickets in coastal lowland habitat. This rare and local subspecies typically nests in cholla

(*Cylindropuntia* spp.) or prickly-pear cactus and feeds mainly on insects. CNNDDB records indicate this subspecies has been documented northeast of the Site. However no observations of this species were observed on the Site during field surveys conducted on March 14 and June 20, 2007. Furthermore, the Site does not support the extensive cactus thickets that are typically occupied by the subspecies. However, the coastal sage scrub habitat within 1.0 mile of the Site or within 1,000 feet of the Project may provide the necessary habitat components for this subspecies. Additionally, coastal sage scrub vegetation with a moderate-sized patch of cactus suitable for coastal cactus wren is located west of the Site adjacent to the Project linear facilities.

Coastal California gnatcatcher (*Polioptila californica californica*) is listed as a Federally Threatened species and categorized as a CDFG California Species of Special Concern. This subspecies is an obligate, permanent resident of coastal sage scrub below an elevation of 2,500 feet in southern California and Baja California. The coastal California gnatcatcher feeds on insects, spiders, and some seeds. CNNDDB records include occurrences of this species within 3 miles the Project site. No coastal California gnatcatchers were observed during field surveys conducted on March 14 and June 20, 2007. However, a pair of coastal California gnatcatchers were documented successfully nesting within 200 feet of the Project linear corridor located immediately west of the Site during protocol surveys for the subspecies conducted during spring 2008 (Figure 6.6-4). A 45-day survey report documenting the results of these surveys has been prepared and submitted to the USFWS (Appendix 6.6-B). Thus, the coastal California gnatcatcher has a high potential to occur within 1.0 mile of the Site and adjacent portions of the Project linear facilities.

Common barn owl (*Tyto alba*) is a San Diego County Group 2 (overall population decreasing) species. This species is nocturnal and occurs in almost all lowland habitats where it roosts in tree hollows, palm trees, other dense trees, and quiet man-made structures. No CNDDDB occurrences have been documented for this species within 10 miles of the Project impact area. However, there are numerous buildings and structures within and adjacent to the Project linear corridor that could provide suitable nesting and roosting sites for this species. Therefore, it has some potential to occur within and adjacent to the Project linear facilities.

Cooper's hawk (*Accipiter cooperii*) is categorized as a CDFG California Species of Special Concern and San Diego County Group 1 (very high level of sensitivity) species. Cooper's hawks are found year-round throughout most of the state, nesting in trees or high places that are typically found in open woodlands or in riparian areas. This species feeds mainly on small to medium-sized birds. CNDDDB records of this species occur within 2.5 miles of the Project site. No Cooper's hawks were observed during field surveys conducted on March 14 and June 20, 2007. However, Cooper's hawks have been observed during subsequent coastal California gnatcatcher surveys on the Site. The Site does not support suitable nesting habitat. However, habitats within 1.0 mile of the Site and within the Project linear facilities do support trees and riparian areas where Cooper's hawks could nest.

Golden eagle (*Aquila chrysaetos*) is a CDFG designated Fully Protected Species and San Diego County Group 1 (very high level of sensitivity) species. Golden eagles are found year-round throughout most of the state, nesting on cliff edges and less often in tall trees. This species feeds

mainly on mammals such as ground squirrels and rabbits and can be found perched or soaring in the air over hillsides. CNDDDB records of this species have been documented within 1.0 mile of the Site. The surrounding western, northern, and eastern hillsides are suitable foraging habitat while nearby cliffs may provide suitable nest sites for this species. No golden eagles were observed during field surveys conducted on March 14 and June 20, 2007. The Site does not support suitable nesting habitat for the species. However, areas within 1.0 mile of the Site and within 1,000 feet of the Project linear facilities provide suitable foraging habitat and may provide nesting sites for this species.

Least Bell's vireo (*Vireo bellii pusillus*) is listed as a Federally and State Endangered and San Diego County Group 2 (overall population decreasing) species. Least Bell's vireo is restricted to riparian habitats found mostly in southern California lowlands. The subspecies is vulnerable to nest parasitism from the brown-headed cowbird (*Molothrus ater*). CNDDDB records of this subspecies have been documented throughout the San Luis Rey River. Though no least Bell's vireos were recorded during field surveys conducted on June 20, 2007, the subspecies has been heard in the riparian areas adjacent to the Project linear corridor during protocol surveys for the subspecies conducted during spring 2008 (remaining surveys and 45-day survey report still pending). The Site does not support suitable least Bell's vireo habitat. However, the San Luis Rey River is located within 1.0 mile of the Project and approximately 1,500 linear feet of the Project linear corridor along SR 76 is within 300 feet of riparian woodland along the San Luis Rey River that could be occupied by this subspecies. Two singing males have been heard in the adjacent riparian habitat during surveys conducted as of June 2008 (Figure 6.6-4).

Red-shouldered hawk (*Buteo lineatus*) is a San Diego County Group 1 (very high level of sensitivity) species. This hawk is historically a resident of lowland riparian woodland, but with the loss of riparian habitat, it has spread into oak woodlands, introduced eucalyptus groves, and large, dense stands of urban trees. The Project site lacks suitable habitat for this species. However, there is riparian woodland, oak trees, and non-native eucalyptus trees suitable for this species along portions of the Project linear corridor where it borders the riparian corridor along the San Luis Rey River and SR 76. No CNDDDB occurrences have been documented within 10 miles of the Project Site. However, a red-shouldered hawk was observed in riparian woodland within 1.0 mile west of the Project site along the San Luis Rey River during coastal California gnatcatcher surveys for this Project.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) is categorized as a CDFG California Species of Special Concern and San Diego County Group 1 (very high level of sensitivity) species. This subspecies is fairly common in sage scrub, burned chaparral, and along firebreaks in mature chaparral. Rufous-crowned sparrows primarily eat small grass and forb seeds, fresh grass stems, plant shoots, ants, grasshoppers, ground beetles, and scale insects. CNDDDB records document this subspecies within 3 miles of the Project site. No southern California rufous-crowned sparrows were observed during field surveys conducted on March 14 and June 20, 2007. However, during subsequent coastal California gnatcatcher surveys this subspecies was observed in the coastal sage scrub adjacent to the Site. The Site does not support suitable habitat for the subspecies. However, the surrounding areas within 1.0 mile of the Site

and within and adjacent to the Project linear facilities located in coastal sage scrub may provide suitable foraging and nesting habitat for this subspecies.

Southwestern willow flycatcher (*Empidonax traillii extimus*) is listed as a Federally Endangered and San Diego County Group 1 (very high level of sensitivity) species. This subspecies uses cottonwood-willow riparian forest for foraging and nesting and feeds on insects by either aerially gleaning from trees, shrubs, and herbaceous vegetation or hawking larger insects by waiting on exposed foraging perches and capturing insects in flight. CNDDDB records document this subspecies approximately 2 miles from the Project site within the San Luis Rey River. No southwestern willow flycatchers were observed on the Site during field surveys conducted on June 20, 2007. Nor does the Site support suitable habitat for the subspecies. However, the San Luis Rey River is located within 1.0 mile of the Project and approximately 1,500 linear feet of the Project linear corridor along SR 76 is within 300 feet of riparian woodland along the San Luis Rey River. Protocol surveys for the subspecies have been conducted during spring 2008 and no evidence of the subspecies has been documented as of June 2008 (remaining surveys and 45-day survey report still pending).

Yellow-breasted chat (*Icteria virens*) is categorized as a CDFG California Species of Special Concern and San Diego County Group 1 (very high level of sensitivity) species. Yellow-breasted chats are found seasonally throughout most of California during the summer months and are seen in dense brushy patches and hedgerows in open sunny areas and in dense riparian woodlands. This species feeds on small insects gleaned from leaves and twigs, as well as berries and nectar. CNDDDB records of this species were documented approximately 0.50 mile east of the Project site along the San Luis Rey River. No yellow-breasted chats were observed during field surveys conducted on June 20, 2007. Nor does the Site support suitable habitat for the species. However, the San Luis Rey River is located within 1.0 mile of the Project and approximately 1,500 linear feet of the Project linear corridor along SR 76 is within 300 feet of riparian woodland along the San Luis Rey River that provides suitable foraging and nesting habitat for this species.

Yellow warbler (*Dendroica petechia brewsteri*) is categorized as a CDFG California Species of Special Concern and San Diego County Group 2 (overall population decreasing) species. This subspecies is considered fairly common in mature riparian woodland on coastal slopes. CNDDDB records document five occurrences of this subspecies within a 10-mile radius of the Project site, including an occurrence within 0.4 mile of the Project site along the San Luis Rey River. No yellow warblers were observed during field surveys conducted on June 20, 2007. Nor does the Site support suitable habitat for the species. However, the San Luis Rey River is located within 1.0 mile of the Project and approximately 1,500 linear feet of the Project linear corridor along SR 76 is within 300 feet of riparian woodland along the San Luis Rey River that provides suitable foraging and nesting habitat for this species.

Arroyo toad (*Bufo californicus*) is listed as a Federally Endangered and San Diego County Group 1 (very high level of sensitivity) species. This toad prefers riparian habitats with sandy streambeds and an overstory of Fremont's cottonwood (*Populus fremontii*), western sycamore (*Platanus racemosa*), and willow trees (*Salix* spp.). However, some populations occur along streams that are within coniferous forest. The arroyo toad breeds both within streams and in

small backwater pools that form along the stream margins, usually in relatively shallow water (4.0 inches). CNDDDB records document nine occurrences of this species within a 1-mile radius of the Project site, including an occurrence within 0.4 mile of the Project site along the San Luis Rey River. No arroyo toads were observed during field surveys conducted on March 14 and June 20, 2007. Furthermore, the Site does not support suitable riparian habitat or surface water that could be used by this species. However, the San Luis Rey River bed and adjacent riparian habitat south of the Site provide suitable habitat for the species. Furthermore, SR 76 is considered to be an effective barrier to the movement of arroyo toads to areas north of SR 76 due to the level of traffic flow on the roadway. Other habitats south of SR 76 are not considered suitable as aestivation habitat for the species, but individuals could move across these areas when foraging or searching for suitable aestivation habitat. Consequently, individuals could be found in these areas during the active season of the species (i.e., February 1 to July 31). A focused habitat assessment for this species was conducted by Cadre Environmental within the Site, Project linear facilities, and adjacent lands. It was determined that no breeding habitat is present within the Project site and that the species is not expected within or near any portions of the Project other than the Project linear corridor south of SR 76.

San Diego horned lizard (*Phrynosoma coronatum blainvillii*) is categorized as a CDFG California Species of Special Concern and San Diego County Group 2 (overall population decreasing) species. This subspecies occurs from the Transverse Ranges south to Baja California. CNDDDB records of this subspecies have been documented approximately 3.5 miles from the Site. The San Diego horned lizard inhabits coastal sage scrub and chaparral, occurring on friable, rocky or shallow sandy soils. Small insects such as ants, particularly the harvester ant (*Pogonomyrmex* spp.), are the preferred food of this ground-dwelling lizard. No San Diego horned lizards or harvester ants were observed during field surveys conducted on March 14 and June 20, 2007. However, several individuals were found in coastal sage scrub within the Project linear corridor immediately west of the Site during surveys conducted by Ecological Outreach Services between May 19 and 22, 2008. Consequently, chaparral and coastal sage scrub habitats within 1.0 mile of the Site and within and adjacent to the Project linear facilities are considered to support this subspecies.

Northern red diamond rattlesnake (*Crotalus ruber ruber*) is categorized as a CDFG California Species of Special Concern and San Diego County Group 2 (overall population decreasing) species. The northern red diamond rattlesnake is a heavy-bodied, venomous pit viper, which occurs in southern California and Baja California from the coast to eastern mountain slopes in rocky areas and dense vegetation such as chaparral, woodland, grassland, and desert. The rattlesnake's diet consists of lizards, birds, and small mammals, including ground squirrels, wood rats, and rabbits. CNDDDB records of this subspecies have been documented approximately 3 miles from the Project site. Furthermore, an individual of this subspecies was observed immediately west of the Site during a field survey for cultural resources conducted on April 14, 2007. Therefore, habitats within 1.0 mile of the Site and within and adjacent to the Project linear facilities are considered to support this subspecies.

Orange-throated whiptail (*Aspidoscelis hyperythra*) is categorized as a CDFG California Species of Special Concern Species and San Diego County Group 2 (overall population

decreasing) species. The orange-throated whiptail is found throughout southwestern California and Baja California, in washes, along streams, on terraces, and in other sandy areas where there are rocks, patches of brush, and rocky hillsides. CNDDDB records of this species have been documented approximately 0.70 mile from the Project site. No orange-throated whiptails were observed during field surveys conducted on March 14 and June 20, 2007. However, habitats within 1.0 mile of the Site and within and adjacent to the Project linear facilities may support this species.

Coastal rosy boa (*Charina trivirgata roseofusca*) is categorized a San Diego County Group 2 (overall population decreasing) species. The rosy boa occurs throughout southern California and western Arizona and is typically found in dense and rocky chaparral and coastal sage scrub habitats from the coast to the desert. CNDDDB records of this species have been documented approximately 4.5 miles from the Project site. No rosy boas were observed during field surveys conducted on March 14 and June 20, 2007. However, habitats within 1.0 mile of the Site and adjacent to the Project linear facilities may support this species.

Quino checkerspot butterfly (*Euphydryas editha quino*) is listed as a Federally Endangered and San Diego County Group 1 (very high level of sensitivity) species. This butterfly is a subspecies of Edith's checkerspot (*Euphydryas editha*). The historical range of the Quino checkerspot butterfly included Los Angeles, Orange, Riverside, and San Diego counties, as well as locations in northern Baja California, Mexico. It is now limited to certain regions in Riverside and San Diego counties, and northern Baja California. The host plants for Quino checkerspot butterfly larvae are plantain (*Plantago erecta*), woolly plantain (*P. patagonica*), Coulter's snapdragon (*Antirrhinum coulterianum*), dark-tip bird's beak (*Cordylanthus rigidus* ssp. *setigerus*), and purple owl's clover (*Castilleja exserta*). Adult butterflies will usually emerge in March and last through April to sometimes early May, depending on winter rains and temperatures. Adults nectar from the flowers of low growing annuals, but shrubs such as California buckwheat are also utilized as nectar sources. This butterfly can be found in coastal sage scrub and chaparral, in open meadows adjacent to coastal sage scrub, and oak woodland as well as juniper woodland and semi-desert scrub. Regardless of the type of habitat, it must have open areas with low-growing and sparse vegetation. Old dirt roads and foot trails, especially those located along hilltops, are suitable for the butterfly and provide a good environment for the territorial males to rest. In addition, the presence of clay soils and cryptogamic crusts favor host plant growth. CNDDDB records document one occurrence of this subspecies approximately 9.5 miles north of the Project site in Riverside County. No Quino checkerspot butterflies or their host plants were observed on the Site during field surveys conducted on March 14 and June 20, 2007. Though plantain (*Plantago erecta*), a larval host plant for this subspecies, was observed during other biological surveys within the Project linear corridor and protocol surveys for coastal California gnatcatcher within the Project site, the Site does not support suitable habitat for the subspecies and focused protocol surveys within the Project linear facilities found no evidence of the subspecies. Areas within 1.0 mile of the Site and within 1,000 feet of the Project linear facilities may provide suitable habitat for this subspecies, but it does not occur within the Site or Project linear facilities. A 45-day survey report documenting the results of the protocol surveys for the subspecies has been prepared and submitted to the USFWS (Appendix 6.6-C).

6.6.1.4 Site Vicinity

The biological resources evaluated for the Project include vegetation communities, plants, wildlife, and wildlife corridors. Regional biological resources described in Section 6.6.1.3 are based on records from the CDFG CNDDDB. A more intensive evaluation, including field surveys, was conducted for the area within 1.0 mile of the Site and within 1,000 feet of Project linear facilities. The Project linear facilities include the proposed natural gas pipeline lateral and an underground electric transmission interconnection. The area within 1.0 mile of the Site and within 1,000 feet of Project linear facilities is referred to herein as the Site "vicinity".

6.6.1.4.1 Field Surveys

Preliminary investigations included examination of aerial photographs, database searches, and review of available data on regional special-status species including:

- CNDDDB records documented within 10 miles of the Project site;
- County of San Diego Guidelines for Determining Significance Sensitive Plant and Animal List; and
- Draft North County Multiple Species Conservation Program (MSCP).

A comprehensive list of special-status species was compiled, including all special-status species that are known to or have the potential to occur in the Project region.

General field surveys to identify biological resources in the Site vicinity focused on documenting special-status plant and animal species, as well as the existing natural vegetation communities. Surveys of the Site and Project linear facilities were conducted on March 14 and June 20, 2007 and February 7 and 12, 2008. These studies included:

- Meandering transects throughout the Site and linear facilities south and north of SR 76 and on either side of Pala del Norte Road within SDG&E's property boundary, and two staging areas south of SR 76 to document and record biological resources;
- Slowly driving Pala del Norte Road outside of SDG&E's property boundary. Pala del Norte Road is a paved road that parallels the western boundary of the Site before turning north and upslope of the Site. Conducting surveys on foot on either side of Pala del Norte Road outside of SDG&E's property boundary was denied by private property owners.
- Driving multiple slow passes on SR 76 from Rice Canyon Road to a point approximately 2,000 feet to the east. Conducting surveys on foot on either side of SR 76 in this area was denied by private property owners.
- Photographing biological resources and natural vegetation communities within the Site and Project linear facilities.

In addition, a general biological assessment of the Fallbrook Public Utility District (FPUD) reclaimed water pickup site was conducted on December 14, 2007. A copy of the biological

assessment is included as Appendix 6.6-D. The FPUD freshwater pick up site was reviewed on May 26, 2008 and the information was included on the biological maps which includes the linear facilities and the site.

Wildlife species were identified directly by sight and/or vocalizations, and indirectly by scat, tracks, or burrows. Field notes were maintained throughout the surveys and observed occurrences of special-status species were mapped. The presence of suitable habitat for special-status species was also identified.

Focused field surveys or habitat assessments to document the presence of federally-listed species (or suitable habitats) that occur in the Site vicinity were conducted by individuals with current federal recovery permits (i.e., Section 10[a][1][A] permits) for the target species. Species addressed by focused surveys or habitat assessments included rare plant surveys, Stephen's kangaroo rat (Appendix 6.6-E), southwestern willow flycatcher (Appendix 6.6-F pending), least Bell's vireo (Appendix 6.6-G pending), coastal California gnatcatcher (Appendix 6.6-B), arroyo toad (Appendix 6.6-H), and Quino checkerspot butterfly (Appendix 6.6-C). The latter focused surveys were conducted consistent with current USFWS survey protocols. Each of the protocol surveys have been completed with the exception of the southwestern willow flycatcher and least Bell's vireo surveys which are scheduled for completion prior to July 17, 2008.

A jurisdictional waters and wetlands delineation was completed for the Site and linear facilities. A copy of the report is included as Appendix 6.5-B.

A rare plant and vegetation survey was completed by Virginia Moran of Ecological Outreach Services. The surveys were conducted from May 19 to 22, 2008.

6.6.1.4.2 Site, Linear Facilities, and Water Pickup Stations

The Site is situated on a portion of a former orchard. Most of the trees remain with their condition ranging from extremely stressed to dead so there is little foliage. The northwesternmost corner of the Site was used for orchard debris disposal and supports disturbed Diegan coastal sage scrub. A fenced storage yard is located approximately 100 feet south of the Site and within one of the Project's proposed construction laydown areas. A SDG&E substation is located approximately 700 feet southwest of the Site. Pala del Norte Road, a paved private road, generally parallels the western boundary of the Site. This road leads to residences located in the hills to the north and east of the Site and provides an entry way to both the SDG&E substation and the storage yard. Pala del Norte Road is located between the SDG&E substation and the Project site. Habitat adjacent to the northern and western boundaries of the Site consists of coastal sage scrub. Upland drainages that run in a generally north to south direction are located to the west and east of the Site. Both of these drainages have been extensively disturbed by orchard land-clearing and debris disposal. The western drainage is lined with scattered remnants of Diegan coastal sage scrub vegetation while the eastern drainage is lined with open coast live oak woodland. An abandoned avocado grove is located east of the eastern drainage. One of three proposed construction laydown areas is located immediately south of the Site between the southern boundary and SR 76 to the south. It is part of the same orchard on which the Site is located and supports non-native grasses and ruderal species. SR 76 is located south of the Site

and this proposed construction laydown area. The San Luis Rey River is located parallel to and south of SR 76. The river is lined with southern riparian forest, but has been extensively disturbed in this area due to aggregate mining activities. The other two proposed construction laydown areas are located south of SR 76 on developed land previously occupied by dairy operations.

The proposed underground electric transmission line will be located primarily within the roadbed or shoulder of Pala Del Norte Road and within a paved driveway that provides access to the existing substation from Pala Del Norte Road. Orchard, non-native grassland, and Diegan coastal sage scrub are the only vegetation types that occur on or adjacent to the underground transmission line route. Transmission line construction will temporarily disturb a small amount of Diegan coastal sage scrub. No wetland or riparian vegetation occurs on or adjacent to the underground transmission line route.

Segment A of the natural gas pipeline begins at the Site boundary and ends at the southeast corner of the Pala substation. For this segment, the pipeline will be adjacent to the underground electric transmission line between the Site and the south end of Pala Del Norte Road. At the south end of Pala Del Norte Road, the transmission line and gas pipeline routes will split. The underground electric transmission line will be installed within the asphalt driveway to the substation as previously described, while the gas pipeline will be routed along an existing unpaved access road that extends beneath the electric transmission lines along the south side of the substation. The unpaved access road extends to an existing unpaved graded pad at the southeast corner of the substation, where this segment terminates. Segment A will be located entirely within developed areas (i.e., roads and road shoulder) except for a short segment of Diegan coastal sage scrub that will be temporarily disturbed for construction. No wetland or riparian vegetation occurs on or adjacent to pipeline route Segment A.

Segment B begins at the existing unpaved graded pad at the southeast corner of the Pala substation and traverses generally steep upland terrain comprised of Diegan coastal sage scrub and ends just south of SR 76 approximately 0.4 air mile southwest of the Pala substation in a former dairy farm. This segment follows existing unpaved roads throughout the upland terrain, except for the easternmost approximately 400 feet where the route is cross-country. Within the former dairy farm, the route is within terrain characterized as urban/developed. No wetland or riparian vegetation occurs on or adjacent to pipeline route Segment B.

Segment C begins on the south side of SR 76 approximately 0.4 air mile southwest of the Pala substation and generally parallels SR 76, following existing roads through the two former dairy farms and riparian forest that occurs between the dairy farms. The west end of Segment C occurs at a second crossing of SR 76, where the pipeline will cross back over to the north side of the road. This segment of the gas pipeline will not disturb any natural habitat, jurisdictional waters, or wetlands. Through the riparian forest, the pipeline construction limits of disturbance will be entirely within an existing 12- to 15-foot-wide unpaved road. The vertical and horizontal clearances required for construction equipment have been verified by field reconnaissance, and only a few branches will require trimming through this area to facilitate safe and efficient construction (if the segment is trenched). Outside of the riparian forest area, Segment C traverses

terrain that is exclusively urban/developed and agriculture with no natural habitat on or adjacent to the pipeline route. It should be noted that the portion of Segment C that is within 300 feet of riparian forest may be directionally drilled to avoid potential impacts to southwestern willow flycatcher or least Bell's vireo.

Segment D is an approximately 0.4-mile-long segment that will be constructed within urban developed land within or adjacent to the SR 76 right-of-way. Agricultural land and the highway are adjacent to this segment, with no natural habitat in areas to be disturbed. Oak woodland and riparian habitat occur near the west end of this segment, but on the opposite side of Rice Canyon Road and SR 76 from where pipeline construction will occur. Diegan coastal sage scrub occurs near the east end of this segment, but well beyond the planned limits of pipeline construction disturbances.

Water for the Project will be supplied by FPUD from two offsite pickup locations that will be constructed, owned, and operated by FPUD. The reclaimed pickup station will be on disturbed land with native habitat (Appendix 6.6-D). The fresh water pickup station will be on disturbed land with no native habitat (Figure 6.6-5). The FPUD fresh water pickup station is in Fallbrook, approximately 5.1 air miles west of the Site. FPUD has an existing easement and water main at this location. The Applicant will obtain an adjacent easement area for this facility and will convey the easement to FPUD. The reclaimed water pickup station will be located within an existing FPUD water reclamation plant facility on disturbed land with no disturbance to native habitat. The reclaim water pickup station location is in Fallbrook, approximately 8.5 air miles from the Site.

6.6.1.4.3 Vicinity Vegetation Communities

The following descriptions are based on habitat classifications from the Preliminary Description of the Terrestrial Natural Communities of California (Holland 1986) as revised by Thomas Oberbauer in Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions (March 2005). These vegetation classifications are categorized within the Project vicinity, including the Site, proposed construction laydown area, and Project linear facilities. The Site consists of an abandoned citrus orchard. The entire Site and adjacent areas to the west, south, and east have been extensively disturbed by orchard activities including land clearing and debris disposal beyond the limits of the trees. The following vegetation communities were observed on and around the Site: non-native grassland, Diegan coastal sage scrub, open coast live oak woodland, disturbed areas, and developed land. Within the Site, there is one established Engelmann oak that the grove appears to have been planted around. In addition, there are a few Engelmann oak saplings and several coast live oak saplings (*Quercus agrifolia*) spread through the Site and surrounding areas within the grove. The oaks are isolated and not part of a larger woodland or forest community. The Project linear facilities consist of undisturbed habitat, existing roads, and areas disturbed by former dairy production. The following vegetation communities were observed on and around the linear facilities: Diegan coastal sage scrub, non-native grassland, southern riparian forest, open coast live oak woodland, agriculture, southern cottonwood willow riparian forest, disturbed areas, and developed land. Figure 6.6-5 shows the distribution of these communities on and immediately surrounding the Site and Project linear

facilities. In addition, southern mixed chaparral was observed within the Project vicinity. A jurisdictional delineation of waters and wetlands was also completed for the Site and Project linear facilities. A copy of the report is included as Appendix 6.5-B. No waters or wetlands will be impacted by the Project.

Non-native grassland (42200)

The non-native grassland occurs primarily to the south of the Site where construction staging and Site secondary access will occur. This habitat is comprised of non-native grasses and herbaceous broadleaf species including foxtail chess (*Bromus madritensis* ssp. *rubens*), short-pod mustard (*Hirschfeldia incana*), filaree (*Erodium cicutarium*), tocalote (*Centaurea melitensis*), and wild oats (*Avena barbata*). This vegetation community is disturbed. However, this habitat type supports a variety of bird, small mammal, and reptile species (e.g., foraging habitat for raptors).

Orchard (18100)

The orchard has not been irrigated for at least 5 years and is no longer viable. Most of the orchard's trees have not yet been cut or removed from the Site. Vegetation found in the orchard understory and between trees consists of non-native grasses and herbaceous broadleaf species, similar to those found in the non-native grassland. Since the Site has not been maintained, a few coastal sage shrub species have established within the Site.

Diegan coastal sage scrub (32500)

Disturbed Diegan coastal sage scrub located in the extreme northwestern corner of the Site is comprised of native scrub species including coastal sagebush, sawtooth goldenbush (*Hazardia squarrosa* var. *grindeloides*), and laurel sumac. This habitat is of low quality due to disturbance by agricultural operations and is intermixed with non-native species of tocalote and short-pod mustard.

The majority of the area surrounding the Site to the north and west is Diegan coastal sage scrub. This sub-shrub community supports coastal sagebrush, white sage, sawtooth goldenbush, California buckwheat, California broom, and golden yarrow (*Eriophyllum confertiflorum* var. *confertiflorum*). The proposed natural gas pipeline and electric transmission line will be installed, in part, within Diegan coastal sage scrub.

Disturbed habitat (11300)

The disturbed area located south of the Site is composed primarily of bare ground and debris from past agricultural activities and the fenced storage yard. The disturbed area includes a driveway to the storage yard that was the entrance to the orchard.

Disturbed areas located primarily south of SR 76 are associated with former aggregate mining operations and dairy cattle operations. The proposed natural gas pipeline will be installed, in part, within disturbed habitat.

Urban/Developed (12000)

One developed area is a storage yard located in the proposed construction laydown area immediately south of the Site. The storage yard contains equipment and several small outbuildings and is completely surrounded by chain-link fence.

Additional developed areas are located mostly south of SR 76 and are associated with former aggregate mining operations and dairy operations. The proposed natural gas pipeline will be installed, in part, within urban/developed land.

Open coast live oak woodland (71161)

Open coast live oak woodland located east of the Site is described as a disturbed upland drainage that supports coast live oaks and Engelmann oaks. Other species recorded in this vegetation community include laurel sumac, sugar bush (*Rhus ovata*), blue elderberry (*Sambucus mexicana*), southern honeysuckle (*Lonicera subspicata* var. *denudata*), poison oak (*Toxicodendron diversilobum*), and Russian thistle (*Salsola tragus*). A stand of open coast live oak woodland is also present immediately north of SR 76 and on a hillside at the intersection of SR 76 and Rice Canyon Road. The proposed natural gas pipeline will be installed outside of this vegetation community.

Southern mixed chaparral (37120)

Southern mixed chaparral is located in the southeastern portion of the Project vicinity and in patches within the northern and northwestern portions of the Project vicinity. Southern mixed chaparral is often a dense shrub community growing on steep to very steep hillsides and slopes. Typically this habitat supports a variety of species such as laurel sumac, chamise, mission manzanita (*Xylcoccus bicolor*), toyon (*Heteromeles arbutifolia*), and Our Lord's candle (*Hesperoyucca [Yucca] whipplei*). No Project activities are planned in or adjacent to this vegetation community.

Southern riparian forest (61300)

Southern riparian forest within the Project vicinity is located south of the Project along the San Luis Rey River. This vegetation community is categorized as a bottomland, riparian community that often supports arroyo willow, black willow, coast live oak, sycamore, poison oak, and mugwort (*Artemisia douglasiana*). The proposed natural gas pipeline will be installed, in part, within an existing road bed that traverses through a small portion of the southern riparian forest.

Southern cottonwood willow riparian forest (61330)

A small amount of southern cottonwood willow riparian forest is located south of SR 76 at the western end of the proposed natural gas pipeline, immediately south of SR 76 at the intersection of SR 76 and Rice Canyon Road. The southern cottonwood willow riparian forest in this location is open and dominated by arroyo willow and mule fat (*Baccharis salicifolia*), with scattered blue elderberry (*Sambucus mexicana*). The proposed natural gas pipeline will be installed outside of this vegetation community.

Table 6.6-3 presents a list of plant and wildlife species that were observed and the habitat in which they were observed on the Site vicinity and linear corridor vicinity. These species were observed during the March 14 and June 20, 2007 and February 7 and 12, 2008 reconnaissance surveys and during the focused 2007-2008 surveys for coastal California gnatcatcher that began December 5, 2007.

Table 6.6-3 – Plant and Wildlife Species Observed During March 2007, June 2007, and February 2008 Biological Surveys, and 2007-2008 Focused Surveys of the Site and Project Linear Facilities Vicinity

COMMON NAME	SCIENTIFIC NAME	HABITAT
PLANTS		
Bedstraw	<i>Galium</i> sp.	DDCSS
Bermuda buttercup	<i>Oxalis pes-caprae</i>	Disturbed, NNG, Orchard
Black sage	<i>Salvia mellifera</i>	DDCSS, DCSS, OCLOW
Blue dicks	<i>Dichelostemma capitatum</i>	DCSS, DDCSS
Blue elderberry	<i>Sambucus mexicanus</i>	NNG, OCLOW
Bristly ox-tongue	<i>Picris echioides</i>	Disturbed, NNG, Orchard
Bush mallow	<i>Malocothamnus fasciculatus</i>	DCSS, DDCSS
Calabazilla	<i>Cucurbita foetidissima</i>	NNG, Orchard
California brickellbush	<i>Brickellia californica</i>	DCSS
California broom	<i>Lotus scoparius</i>	DCSS, DDCSS,
California buckwheat	<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	DCSS, DDCSS
California burclover	<i>Medicago polymorpha</i>	DDCSS, DIS, NNG
California peony	<i>Paeonia californica</i>	DCSS, DDCSS
California poppy	<i>Eschscholzia californica</i>	DCSS, DDCSS
Coastal sagebrush	<i>Artemisia californica</i>	DCSS, DDCSS, Orchard
California wood-sorrel	<i>Oxalis albicans</i> ssp. <i>californica</i>	DCSS
Chia	<i>Salvia columbariae</i>	DCSS, DDCSS
Climbing milkweed	<i>Sarcostemma cynanchoides</i> ssp. <i>hartwegii</i>	DCSS
Coast cholla	<i>Cylindropuntia</i> [<i>Opuntia</i>] <i>prolifera</i>	DCSS, DDCSS
Coast live oak	<i>Quercus agrifolia</i> var. <i>agrifolia</i>	OCLOW, Orchard
Coast monkeyflower	<i>Mimulus aurantiacus</i>	DCSS
Coast prickly-pear	<i>Opuntia littoralis</i>	DCSS, DDCSS
Coast Range melic	<i>Melica imperfecta</i>	DCSS
Coffee fern	<i>Pellaea andromedifolia</i>	DCSS
Collar lupine	<i>Lupinus truncatus</i>	DCSS, DDCSS
Common mallow	<i>Malva neglecta</i>	Orchard
Coyote brush	<i>Baccharis pilularis</i>	DCSS, DDCSS, Disturbed, Orchard
Crete weed	<i>Hedypnois cretica</i>	Disturbed. NNG
Curly dock	<i>Rumex crispus</i>	Disturbed, Orchard
Desert wild grape	<i>Vitis girdiana</i>	OCLOW
Dodder	<i>Cuscuta</i> sp.	DCSS, OCLOW,

COMMON NAME	SCIENTIFIC NAME	HABITAT
Dove-foot geranium	<i>Geranium molle</i>	DDCSS, DIS, NNG, Orchard
Dove weed	<i>Eremocarpus setigerus</i>	NNG, Orchard
Dwarf nettle	<i>Urtica dioica</i>	DIS, OCLOW,
Engelmann oak	<i>Quercus engelmannii</i>	OCLOW, Orchard
Eucalyptus	<i>Eucalyptus</i> sp.	DIS
False-mustard	<i>Camissonia californica</i>	DCSS, DDCSS
Fascicled tarweed	<i>Deinandra fasciculata</i>	DDCSS, NNG
Fennel	<i>Foeniculum vulgare</i>	Disturbed, NNG, Orchard,
Foxtail chess	<i>Bromus madritensis</i> ssp. <i>rubens</i>	DDCSS, DCSS, , DIS, NNG, Orchard
Golden-yarrow	<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	DCSS, DDCSS
Granny's hairnet	<i>Pterostegia drymarioides</i>	DDCSS
Hare barley	<i>Hordeum murinum</i>	DCSS, DDCSS, NNG, Orchard
Holly-leaf redberry	<i>Rhamnus ilicifolia</i>	DCSS
Horehound	<i>Marrubium vulgare</i>	Orchard
Horseweed	<i>Conyza canadensis</i>	DEV, DIS, NNG
Indian-fig	<i>Opuntia ficus-indica</i>	DIS, URB
Jimson weed	<i>Datura wrightii</i>	DIS, Orchard
Laurel sumac	<i>Malosma laurina</i>	DCSS, DDCSS, NNG
Lemon	<i>Citrus limon</i>	Orchard
Long-beak filaree	<i>Erodium botrys</i>	DDCSS, DIS, NNG, Orchard
Man-root	<i>Marah macrocarpus</i>	DCSS DDCSS, OCLOW,
Mediterranean grass	<i>Schismus barbatus</i>	DDCSS, DIS
Milk thistle	<i>Silybum marianum</i>	DDCSS, DIS
Miner's-lettuce	<i>Claytonia perfoliata</i>	DCSS
Morning-glory	<i>Calystegia macrostegia</i>	DDCSS, NNG, OCLOW
Mouse-ear chickweed	<i>Cerastium glomeratum</i>	DDCSS, DIS,
Mule fat	<i>Baccharis salicifolia</i>	Orchard
Olive	<i>Olea europaea</i>	DIS
Pampas grass	<i>Cortaderia selloana</i>	Orchard
Parry's phacelia	<i>Phacelia parryi</i>	DCSS
Parry's tetracoccus	<i>Tetracoccus dioicus</i>	DCSS, DDCSS
Pectocarya	<i>Pectocarya</i> sp.	DCSS
Peruvian peppertree	<i>Schinus molle</i>	DIS, NNG,
Phacelia	<i>Phacelia</i> sp.	DCSS, DDCSS, OCLOW
Pincushion	<i>Chaenactis</i> sp.	DCSS, DDCSS
Pine	<i>Pinus</i> sp.	DIS

COMMON NAME	SCIENTIFIC NAME	HABITAT
Plantain	<i>Plantago erecta</i>	DCSS, DDCSS
Poison oak	<i>Toxicodendron diversilobum</i>	DCSS, OCLOW
Popcornflower	<i>Plagiobothrys</i> sp.	DCSS, DDCSS
Prickly lettuce	<i>Lactuca serriola</i>	NNG, Orchard
Prickly-pear	<i>Opuntia</i> sp.	DCSS, OCLOW
Prickly sow thistle	<i>Sonchus asper</i>	DDCSS, Disturbed, NNG, URB/DEV
Pygmy-weed	<i>Crassula connata</i>	DCSS, DDCSS
Rancher's fireweed	<i>Amsinckia menziesii</i>	DDCSS, NNG,
Rattlesnake weed	<i>Chamaesyce albomarginata</i>	DDCSS, DIS
Red maids	<i>Calandrinia ciliata</i>	DCSS, DDCSS
Red-stem filaree	<i>Erodium cicutarium</i>	DDCSS, DIS, NNG, Orchard
Ripgut grass	<i>Bromus diandrus</i>	DDCSS, DIS, NNG, Orchard
Russian thistle	<i>Salsola tragus</i>	DIS, NNG OCLOW, Orchard,
Sawtooth goldenbush	<i>Hazardia squarrosa</i> var. <i>grindelioides</i>	DCSS, DDCSS
Shining peppergrass	<i>Lepidium nitidum</i> var. <i>nitidum</i>	DDCSS, DIS, NNG
Short-pod mustard	<i>Hirschfeldia incana</i>	DDCSS, DIS, NNG, Orchard
Silverback fern	<i>Pentagramma triangularis</i> ssp. <i>viscosa</i>	DCSS
Slender wild oats	<i>Avena barbata</i>	DIS, NNG, Orchard
Smilo grass	<i>Piptatherum miliaceum</i>	DIS, NNG
Smooth cat's-ear	<i>Hypochaeris glabra</i>	DDCSS, DIS, NNG
Soap plant	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	DCSS, DDCSS
Soft chess	<i>Bromus hordeaceus</i>	DCSS, DDCSS, DIS, NNG, Orchard
Southern honeysuckle	<i>Lonicera subspicata</i> var. <i>denudata</i>	OCLOW
Spotted hideseed	<i>Eucrypta chrysanthemifolia</i> var. <i>chrysanthemifolia</i>	DDCSS, DIS, OCLOW
Stinging lupine	<i>Lupinus hirsutissimus</i>	DCSS, DDCSS
Sugar bush	<i>Rhus ovata</i>	DCSS, DDCSS, NNG
Sun cup	<i>Camissonia</i> sp.	DCSS, DDCSS,
Telegraph weed	<i>Heterotheca grandiflora</i>	DIS, NNG, Orchard
Tocalote	<i>Centaurea melitensis</i>	DDCSS, DIS, NNG, Orchard
Toyon	<i>Heteromeles arbutifolia</i>	OCLOW
Tree tobacco	<i>Nicotiana glauca</i>	DIS, NNG
Virgin's bower	<i>Clematis ligusticifolia</i>	DCSS, OCLOW
Western ragweed	<i>Ambrosia psilostachya</i>	DIS, Orchard,
White-stem filaree	<i>Erodium moschatum</i>	DDCSS, Disturbed, Orchard,

COMMON NAME	SCIENTIFIC NAME	HABITAT
White sage	<i>Salvia apiana</i>	DCSS, DDCSS,
Wild oat	<i>Avena fatua</i>	DIS, NNG,
Wild radish	<i>Raphanus raphanistrum</i>	DIS, NNG
Wishbone bush	<i>Mirabilis californica</i>	DCSS, DDCSS
Yellow bush penstemon	<i>Keckiella antirrhinoides</i> var. <i>antirrhinoides</i>)	DCSS, DDCSS
INVERTEBRATES		
Acmon blue	<i>Icarcia acmon</i>	Orchard
Behr's metalmark	<i>Apodemia mormo virgulti</i>	DDCSS
Brown garden snail	<i>Cantareus aspersus</i>	Orchard
Pacific Sara orangetip	<i>Anthocharis sara</i>	DDCSS
Painted lady	<i>Vanessa cardui</i>	DDCSS, DIS
REPTILES		
Northern red diamond rattlesnake ⁽¹⁾	<i>Crotalus ruber ruber</i>	DCSS
Side-blotched lizard	<i>Uta stansburiana</i>	DCSS
Western fence lizard	<i>Sceloporus occidentalis</i>	Orchard
BIRDS		
Acorn woodpecker	<i>Melanerpes formicivorus</i>	OLOW, Overhead
American crow	<i>Corvus brachyrhynchos hesperis</i>	Overhead
American kestrel	<i>Falco sparverius</i>	Overhead
Anna's hummingbird	<i>Calypte anna</i>	DCSS, Orchard,
Bewick's wren	<i>Thryomanes bewickii</i>	DCSS, DDCSS
Black phoebe	<i>Sayornis nigricans</i>	Orchard
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>	DCSS, DDCSS, DIS
Brown-headed cowbird	<i>Molothrus ater</i>	DDCSS, Orchard
Bushtit	<i>Psaltriparus minimus</i>	DCSS, DDCSS
California towhee	<i>Pipilo crissalis</i>	DCSS, DDCSS, Orchard
Cliff swallow	<i>Petrochelidon pyrrhonata</i>	Overhead
Coastal California gnatcatcher ⁽²⁾	<i>Polioptila californica californica</i>	DCSS
Common raven	<i>Corvus corax</i>	DCSS, Orchard, Overhead
European starling	<i>Sturnus vulgaris</i>	Orchard
House finch	<i>Carpodacus mexicanus</i>	Orchard
Lesser goldfinch	<i>Carduelis psaltria</i>	DCSS, DDCSS, Orchard
Mourning dove	<i>Zenaida macroura</i>	DDCSS, Orchard
Northern flicker	<i>Colaptes auratus</i>	DCSS, Orchard
Northern harrier	<i>Circus cyaneus</i>	DCSS, NNG, Orchard
Northern mockingbird	<i>Mimus polyglottos</i>	Orchard

COMMON NAME	SCIENTIFIC NAME	HABITAT
Red-tailed hawk	<i>Buteo jamaicensis</i>	DCSS, Orchard, Overhead
Say's phoebe	<i>Sayornis saya</i>	DCSS, DDCSS
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	DCSS, DDCSS
Spotted towhee	<i>Pipilo maculatus</i>	DCSS, DDCSS
Turkey vulture	<i>Cathartes aura</i>	Overhead
Western kingbird	<i>Tyrannus verticalis</i>	Disturbed, Orchard
Western meadowlark	<i>Sturnella neglecta</i>	DDCSS, DIS, Orchard
Western scrub jay	<i>Aphelocoma californica obscura</i>	DCSS, DDCSS, Orchard
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	DCSS, DDCSS
Wrentit	<i>Chamaea fasciata henshawi</i>	DCSS, DDCSS, Orchard
Yellow-rumped warbler	<i>Dendroica cornat</i>	DCSS, DDCSS, DIS, Orchard
MAMMALS		
Audubon's cottontail	<i>Sylvilagus audubonii</i>	DCSS, DDCSS, Orchard
California ground squirrel	<i>Spermophilus beecheyi nudipes</i>	DIS, Orchard
Coyote (scat)	<i>Canis latrans</i>	DCSS, DDCSS
Dusky-footed woodrat (middens)	<i>Neotoma fuscipes</i>	DCSS, Orchard

- (1) Observed west of the Project Site during an April 14, 2007 cultural survey
 - (2) Observed during USFWS protocol-level surveys for coastal California gnatcatcher
- OCLOW = Open coast live oak woodland
 DDCSS = Disturbed Diegan coastal sage scrub
 DCSS = Diegan coastal sage scrub
 NNG = Non-native grassland
 DEV = Developed
 DIS=Disturbed habitat

6.6.1.4.4 Vicinity Wildlife

Table 6.6-3 presents a list of wildlife species that were observed in the Project vicinity during the March 14, 2007, June 20, 2007, and February 7 and 12, 2008 biological surveys, and the 2007-2008 focused surveys for coastal California gnatcatcher, and the habitats in which they were observed. The Site is an abandoned citrus orchard. Therefore, the vegetation communities within the Site contain limited and marginally suitable wildlife habitat. However, the Project vicinity, which includes the Project linear facilities, has a large percentage of native vegetation and potentially supports suitable wildlife habitat and wildlife movement.

Wildlife inhabiting southern riparian forest within the Project vicinity typically include riparian-associated bird species such as least Bell's vireo, western wood pewee, yellow warbler, yellow-breasted chat, southwestern willow flycatcher, oak titmouse, song sparrow, ash-throated flycatcher, violet-green swallow, house wren, and Cooper's hawk. Amphibians and reptiles inhabiting these habitat types include the arroyo toad, western spadefoot, western toad, two-

striped garter snake, and San Diego ringneck snake. Mammals inhabiting these areas include such species as the brush rabbit, Virginia opossum, raccoon, coyote, and bobcat.

Wildlife inhabiting the Diegan coastal sage scrub habitat within the Project vicinity typically includes small mammals such as deer mouse, Pacific pocket mouse, San Diego desert woodrat, and desert cottontail, which are prey for coyotes, raptors, and other predators. Coastal sage scrub provides foraging habitat for a large array of bird species, including but not limited to the coastal California gnatcatcher, California thrasher, California towhee, coastal cactus wren, common raven, spotted towhee, red-tailed hawk, white-tailed kite, and American kestrel. Reptiles, including the coast horned lizard, orange-throated whiptail, western fence lizard, side-blotched lizard, San Diego gopher snake, and northern red diamond rattlesnake, can also be found within this habitat type.

Wildlife inhabiting the non-native grassland habitat within the Project vicinity typically includes mammals such as Botta's pocket gopher, desert cottontail, California ground squirrel, American badger, and coyote. Non-native grasslands provide foraging habitat for a variety of raptor species, including the American kestrel, red-tailed hawk, white-tailed kite, northern harrier, ferruginous hawk, turkey vulture, golden eagle, and barn owl. These areas provide foraging habitat for other bird species including mourning dove, western meadowlark, Say's phoebe, song sparrow, white-crowned sparrow, California horned lark, western kingbird, and loggerhead shrike. Reptiles such as the side-blotched lizard and gopher snake also inhabit non-native grasslands.

Wildlife inhabiting the southern mixed chaparral habitat within the Project vicinity includes mammals such as the Dulzura pocket mouse, San Diego northwestern pocket mouse, San Diego black-tailed jackrabbit, San Diego desert woodrat, desert cottontail, coyote, bobcat, and mountain lion. Chaparral supports a large array of bird species including, but not limited to Anna's hummingbird, Bewick's wren, California quail, California towhee, spotted towhee, California thrasher, mourning dove, northern mockingbird, lesser goldfinch, Bell's sage sparrow, southern California rufous-crowned sparrow, red-tailed hawk, American kestrel, white-tailed kite, and golden eagle. Reptiles found in this habitat type include the western fence lizard, side-blotched lizard, orange-throated whiptail, southern alligator lizard, and northern red diamond rattlesnake.

6.6.1.4.5 Special-Status Species with the Potential to Occur in the Project Vicinity

Plants

Five special-status plant species have been historically recorded within the Project vicinity, according to the CNDDDB database. These species are chaparral nolina, felt-leafed monardella, mesa horkelia, Parry's tetraococcus, and Robinson's peppergrass. According to the CNDDDB, Parry's tetraococcus and chaparral nolina have been documented in an area encompassing the Site, while felt-leafed monardella and mesa horkelia have been documented approximately 1.0 mile east of the Site, and Robinson's peppergrass has been documented approximately 0.70 mile northeast of the Site. Parry's tetraococcus has been documented just inside the western boundary of the Site and along the northern and eastern Site boundaries during the March 14, 2007,

June 20, 2007, February 7 and 12, 2008 reconnaissance surveys, and subsequent focused surveys for special-status plants.

Wildlife

Seven special-status wildlife species have been historically recorded within the Project vicinity, according to the CNDDDB. These species are coastal cactus wren, golden eagle, least Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, arroyo toad, and orange-throated whiptail. Coastal cactus wren has been observed about 0.4 mile northeast of the Site and the orange-throated whiptail has been observed 0.8 mile south of the Site, while golden eagle has been recorded within less than 1.0 mile from the Site. No special-status wildlife species were observed in the Project vicinity during the March 14 and June 20, 2007 surveys. However, coastal California gnatcatcher was observed in the Project vicinity during the non-breeding and breeding seasons focused surveys for this subspecies. The coastal California gnatcatcher is listed as a Federally Threatened species and California Species of Special Concern. In addition, a northern red diamond rattlesnake was observed in the Project vicinity during an April 18, 2007 cultural survey. The northern red diamond rattlesnake is a CDFG California Species of Special Concern. The only other special-status species that have been recorded in the Project vicinity is San Diego horned lizard. This latter subspecies was found during focused special-status plant surveys conducted during May 2008.

6.6.2 Impacts

6.6.2.1 Significance Criteria

The following significance criteria are based on the California Environmental Quality Act (CEQA) Guidelines, Appendix G, Environmental Checklist Form and standards adopted by responsible agencies. Using these criteria, an impact may be considered significant if the Project results in:

- 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.
- A substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.
- 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.
- Substantial interference with the movement of any native, resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state Habitat Conservation Plan.
- The potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal species.

6.6.2.2 Construction Impacts and Mitigation

This section describes the temporary and permanent impacts to biological resources associated with Project construction and proposed mitigation measures. Direct impacts to biological resources will occur from construction as a result of brushing, grading, and trenching the Project area. Indirect impacts will occur on the fringes of Project site construction due to increased noise and human presence for the 6-month construction period. Indirect noise impacts of construction along the pipeline routes will occur only for short periods of time (e.g., hours) at any given area, since the pipelines will be constructed in short segments at a time.

Upgrades to existing transmission systems that will be required for the Project are described in Sections 2.0 and 3.0. SDG&E work that will occur within the Pala substation is not expected to result in any biological impacts beyond those described herein. Transmission system upgrades downstream of the substation will be required as described in Section 3.0, including reconductoring, changing relay settings, and other work. Transmission system upgrades will be performed by SDG&E and will be finalized in conjunction with the Large Generator Interconnecting Agreement. Once the Large Generator Interconnection Agreement is executed, transmission system upgrade design work will be completed by SDG&E. The potential for additional impacts to biological resources may be determined once the design for transmission system upgrades is developed by SDG&E. If needed, additional surveys will be completed to address these transmission system upgrades to the extent they may be located outside of the survey boundaries described herein.

Project construction disturbance areas are identified in Table 6.6-4.

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Table 6.6-4 – Vegetation Communities and Construction Impacts

HABITAT/ VEGETATION COMMUNITIES	ONSITE IMPACT (ACRES)	LINEAR FACILITIE S IMPACT (ACRES)	SITE ACCESS (ACRES)	CONSTRUC -TION LAYDOWN IMPACT (ACRES)	FUEL MODIFI- CATION ZONE ⁽¹⁾ (ACRES)	RECLAIMED WATER PICKUP STATION (ACRES)	FRESH WATER PICKUP STATION (ACRES)	TOTAL (ACRES)
Diegan Coastal Sage Scrub	0.3	7.5	0.1	0.0	1.4	0.0	0.0	9.3
Urban developed	0.0	8.3	0.0	0.0	0.3	0.3	0.1	9.0
Disturbed	0.0	2.0	0.0	0.0	0.0	0.1	0.0	2.1
Non-native Grassland	0.1	0.1	0.2	2.5	0.4	0.0	0.1	3.4
Southern Riparian Forest	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agriculture	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
Southern Cottonwood Willow Riparian Forest	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchard	7.9	0.0	0.7	2.5	0.1	0.0	0.0	11.2
TOTAL	8.3	18.9	1.0	5.0	2.2	0.4	0.2	36.0

(1) Includes areas where brush will be cleared for fire protection in conformance with County requirements and the project Fire Protection Plan.

6.6.2.2.1 *Special-Status Species*

The Site including access, Project linear facilities, fuel modification zone, water pickup construction areas and temporary construction laydown area will occupy approximately 9.3, 18.9, 2.2, 0.6 and 5.0 acres, respectively (please refer to Table 6.6-4). Linear facility construction will include trenching and backfilling for installation of the natural gas pipeline and electric transmission line (though directional drilling may be utilized along some small segments of the natural gas pipeline to avoid potential noise and visual impacts to southwestern willow flycatcher, least Bell's vireo, and arroyo toad located south of SR 76. Project construction will include dust control. In addition, Occupation Safety and Health Administration (OSHA) and other standards for noise will be followed during construction to minimize noise impacts to wildlife including special-status species. A noise analysis is provided in Section 6.12, Noise Control.

The contractor will be responsible to obtain water during construction. The reclaimed water site is an existing facility and therefore no impact to existing habitat will occur. No native vegetation communities or habitat occur at the freshwater pickup site. There will be no impacts to biological resources from construction or use of the site.

Storm water discharges from the Site during construction will be in accordance with the State General National Pollutant Discharge Elimination System (NPDES) Permit. A Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs) will be implemented to prevent impacts to storm water quality. Wildlife will not be impacted by construction storm water runoff because of these water quality protection measures and changes in runoff conditions will be minor (see Section 6.5, Water Resources).

Coastal California Gnatcatcher

Construction noise and activities will be short-term, as construction will occur only during working hours, and the construction period is only 6 months. Along the linear facilities, construction noise will generally occur only for several hours in a given location as construction progresses in short segments along the pipeline route. Wildlife will be able to temporarily relocate to adjacent lands if disturbed by noise and activities from Project construction. Project impacts on most wildlife from construction noise and activities are will be less than significant. However, Project impacts on the coastal California gnatcatcher from construction noise and activities during the breeding season (March 15 through June 30) may be significant. One nesting pair of this subspecies was documented within approximately 200 feet of the Project linear facilities west of the Site (Figure 6.6-4). Potential indirect Project impacts to this pair of coastal California gnatcatchers will be reduced to less than significant through the acquisition of a Habitat Loss Permit (HLP) for coastal sage scrub from the DPLU (as allowed under Section 4[d] of the Federal ESA) and compliance with all associated permit conditions. The Project will impact approximately 9.3 acres of coastal sage scrub. The actual impacts to coastal sage scrub and nonnative grassland will be verified at the time of construction and is expected to be mitigated based on actual impact acreage. Based on discussions with DPLU and USFWS, the County will require a minimum 2:1 compensation ratio for the disturbance to Diegan coastal sage scrub. Orange Grove Energy is researching approved mitigation banks in San Diego County and will coordinate with DPLU and USFWS through the HLP process on approval. A limited construction period (i.e., June 30 to March 15) will also be implemented within 500 feet of the documented nests of the coastal California gnatcatcher pair. If construction were to occur within coastal sage scrub between March 15 to June 29 (the breeding period) a survey will be conducted to identify nesting gnatcatchers. Construction will be directed to stay a minimum of 500 feet away from the nesting gnatcatchers until the young have fledged. Implementation of these Project measures will reduce potential impacts to coastal California gnatcatcher to less than significant.

Southwestern Willow Flycatcher and Least Bell's Vireo

Construction noise and activities may also indirectly impact nesting southwestern willow flycatcher and least Bell's vireo along those portions of the pipeline route within 300 feet of the riparian forest south of SR 76. Avoidance of these latter impacts will be achieved from the use of a limited construction period in these areas (i.e., no construction in these areas between March 15 and September 15) or directional drilling of this portion of the pipeline route to avoid indirect impacts within 300 feet of the suitable habitat for these species. A limited construction period will also be utilized to address potential direct impacts to arroyo toad south of SR 76. Implementation of these Project measures will reduce potential impacts to these species to less than significant.

Other Special-Status Species Associated with Coastal Sage Scrub

Other special-status species that are associated with coastal sage scrub and occur in the Project vicinity (e.g., San Diego horned lizard and northern red diamond rattlesnake) could also be directly affected during construction of the overland portion of the Project linear facilities immediately west of the Site. No long-term impacts due to habitat loss would occur as a result of construction in this portion of the Project linear corridor since most of the disturbance would

occur within an existing dirt road. However, individuals of terrestrial species could fall into the construction trench and not be able exit the trench. Such individuals could then be subject to temperature stress, dessication, and other adverse impacts that result in mortality or morbidity. To reduce such potential impacts to less than significant, passive escape ramps will be constructed to allow wildlife species to exit the trench when the trench will be left open during the night. In addition, a biological monitor will be onsite during active construction to remove individuals that have entered the trench. Implementation of these Project measures will reduce potential impacts to these species to less than significant.

Parry's Tetracoccus

Parry's tetracoccus was observed just inside the northern and eastern boundaries of the Site (Figure 6.6-4). Therefore, direct impacts to approximately 10 individual Parry's tetracoccus will occur during Site grading and establishment of the fuel modification zone. Parry's tetracoccus was also observed immediately outside the northern and eastern boundaries of the Site where no disturbance will occur and no impacts to these plants are expected. Immediately prior to construction, all Parry's tetracoccus shrubs will be flagged by a botanist familiar with this species in the Project area and vicinity. A preconstruction conference will be held with all on-the-ground construction staff and the Project foreman to ensure they are aware of these populations and to avoid impacts to these populations if possible. Orange Grove Energy will retain a botanist familiar with the species to develop a plan for relocation of the shrubs that will be impacted by construction. The shrubs will be relocated out of the impact area using equipment that may be onsite for construction. Care will be taken to remove as much of the intact root system as possible to ensure survival. Parry's tetracoccus plants would be transplanted quickly, or, if limited storage was necessary, roots will be balled and kept moist throughout the waiting period. A transplant plan will be written in cooperation with the Project foreman and project manager. Alternatively, Parry's tetracoccus could be maintained by collecting seed from affected shrubs or from shrubs in the area to maintain genetic integrity, grown, and the plants transplanted on the Project site or in an adjacent mitigation area. Implementation of these mitigation measures will reduce the impact to this species to less than significant.

Engelmann Oak

Project construction will impact one established Engelmann oak, a few Engelmann oak saplings, and several small coast live oaks during Site grading. However, construction will include landscaping of portions of the Site with Engelmann oaks. Therefore, the impact is considered less than significant.

Native Trees

Fifty-three native trees with a diameter at breast height of 6 inches or greater were identified as being located within the linear corridor. Most of the native trees were located within the riparian zone and include arroyo willow, black willow, and cottonwood. All native trees will be protected if possible. Immediately prior to construction, all native trees in the vicinity of the Project area will be flagged and a preconstruction conference will be held with all on-the-ground construction staff and the Project foreman to ensure they are aware of these trees and to avoid impacts to these trees. Trees can be harmed directly, or by construction impacts within and

outside the tree's drip line. Critical zones of a tree include the canopy and drip line, however, roots can extend outward at twice the length of the canopy. Therefore, these zone will be designated and flagged, and fenced off if necessary using orange construction fencing. Flagging and construction fencing will be maintained throughout the construction period. Implementation of these mitigation measures will reduce the impacts to native trees to less than significant.

6.6.2.2.2 *Special-Status Species not Expected to be Impacted*

The following special-status plant species were not observed during the March 14, 2007, June 20, 2007, and February 7 and 12, 2008 field surveys or focused special-status plants surveys conducted during May 2008. Therefore, they are not expected to be impacted by the Project for the following reasons:

- Chaparral nolina is a distinctive evergreen perennial that occurs in Diegan coastal sage scrub and open chaparral. This species was not observed during 2007 or 2008 Site and Project linear corridor surveys. Therefore, no significant impacts to this species are expected to occur.
- Felt-leaved monardella grows in chaparral and cismontane woodland. It typically occurs beneath mature stands of chamise under xeric conditions and has a tendency to occupy undeveloped peaks and mountainous ridgelines. Areas that will be disturbed for Project construction lack suitable habitat for this special-status species and this suffrutescent perennial was not observed during the 2007, or 2008 Site and Project linear facilities surveys. Therefore, no significant impacts to this species are expected to occur.
- Mesa horkelia often occupies low-growing, moderately dense chaparral habitat with associated chamise, manzanita (*Arctostaphylos* spp.), and Cleveland's sage (*Salvia clevelandii*). Areas that will be disturbed for Project construction lack suitable habitat for this special-status species and this herbaceous perennial was not observed during the 2007 or 2008 Site and Project linear corridor surveys. Therefore, no significant impacts to this species are expected to occur.
- Robinson's peppergrass is an annual species that grows in chaparral and coastal sage scrub openings generally well away from the coast in the foothill elevations. This subspecies is typically observed in dry, exposed locations, rather than beneath a shrub canopy or along creeks. This subspecies was not observed during 2007 or 2008 Site and Project linear corridor surveys. Therefore, no significant impacts to this subspecies are expected to occur.

Special-status wildlife species that occur within the Project vicinity according to the CNDDDB include coastal cactus wren, golden eagle, least Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, arroyo toad, and orange-throated whiptail. None of the above mentioned species were observed during the March 14, 2007, June 20, 2007, or February 2008 field surveys, during a December 2007 habitat assessment within 500 feet of the Site for coastal cactus wren and least Bell's vireo, or during a December 2007 habitat assessment of the Site for arroyo toad. Focused species-specific surveys for least Bell's vireo, southwestern willow flycatcher, and

coastal California gnatcatcher have been conducted and have documented least Bell's vireo and coastal California gnatcatcher to date (final surveys and 45-day reports pending for the least Bell's vireo and southwestern willow flycatcher). Furthermore, San Diego horned lizard and northern red diamond rattlesnake have been documented within the Project vicinity during surveys conducted for the Project. Coastal cactus wren, golden eagle, yellow-breasted chat, and orange-throated whiptail are not expected to be impacted by the Project for the following reasons:

- The coastal cactus wren has been historically documented in the northeastern portion of the Project vicinity and is known to occur and nest in coastal sage scrub and chaparral communities occupied by extensive patches of cactus, particularly native prickly pear. There is suitable habitat west of the Project site. Furthermore, no coastal cactus wrens have been observed during the March 2007, June 2007, or February 2008 Site and Project linear corridor surveys, or during the December 2007 habitat assessment for coastal cactus wren and least Bell's vireo. No significant impacts to this special-status species are therefore expected to occur.
- Golden eagles have been historically documented within the vicinity of the Site and the ranges around the northern, northeastern, eastern, southeastern, and southern territories of the Project vicinity. This species rarely occurs in grassland and open areas, preferring to hunt and nest along vast hillsides unfrequented by human activity. Areas that will be disturbed for Project construction lack suitable nesting habitat for this special-status species, but do provide foraging habitat. CNDDDB records from 2000 document a golden eagle nest approximately 1-mile west of Pala in deciduous woods. The Project impact area is therefore considered to be located within a golden eagle nest territory and foraging by this species could occur within the Project area. Since all Project construction activities will be limited to a small percentage of available foraging habitat in the Project vicinity and no golden eagles have been observed during the March 2007, June 2007, or February 2008 Site and Project linear corridor surveys, or during the December 2007 habitat assessment for coastal cactus wren and least Bell's vireo, no significant impacts to this species are expected to occur.
- Yellow-breasted chat was documented approximately 0.50 mile east of the Site, along the San Luis Rey River. This species is known to occupy dense thickets, brush, and streamside tangles. There is suitable riparian woodland habitat for this species along portions of the natural gas pipeline route where it borders the riparian corridor along the San Luis Rey River. No yellow-breasted chat have been observed during the June 2007 Site and Project linear corridor surveys. Furthermore, the limited construction period or directional drilling used to address potential impacts to southwestern willow flycatcher and least Bell's vireo will also address potential impacts to this species.
- Orange-throated whiptail was documented approximately 1.0 mile south of the Site. This species inhabits a variety of vegetation communities that thrive in loose, well-drained soils including chaparral, coastal sage scrub, and coastal strand vegetation. This species appears to be tied to the presence of certain perennial plants, probably because its staple prey (termites) requires these perennial plants as a food base. The

northwestern corner of the Site supports disturbed Diegan coastal sage scrub and therefore may provide suitable habitat for this special-status species. There is suitable habitat west of the Project site where the natural gas overland segment is proposed. Orange-throated whiptail has not been observed during the March 2007, June 2007, or February 2008 Site and linear corridor surveys, or during the December 2007 habitat assessment for coastal cactus wren and least Bell's vireo. Since all Project construction activities will be limited to a small percentage of available habitat in the Project vicinity (mostly in existing dirt road), and this species is capable of moving away from imminent threat; the Project will not have a substantial adverse effect on the regional long-term survival of the orange-throated whiptail and no significant impacts to this species are expected to occur.

- Least Bell's vireo has been historically documented in and around the San Luis Rey River with the closest occurrence approximately 0.30 mile south of the Site. This subspecies primarily inhabits riparian woodlands, scrub, and thickets for breeding. There is suitable riparian woodland for this species along portions of the proposed natural gas pipeline route where it borders the riparian corridor along the San Luis Rey River. Furthermore, individuals have been heard singing during protocol surveys for the subspecies conducted during spring 2008 in the riparian corridor adjacent to the natural gas pipeline route (final surveys and 45-day report pending). However, the use of a limited construction period (i.e., September 15 to March 15) or directional drilling will temporarily or spatially, respectively, avoid potential indirect impacts to this subspecies from construction noise and activities.
- Southwestern willow flycatcher was documented approximately 700 feet south of SR 76, north of the San Luis Rey River. This subspecies is known to occupy low brushy vegetation, especially riparian willow thickets. There is suitable riparian woodland habitat for this species along portions of the natural gas pipeline route where it borders the riparian corridor along the San Luis Rey River. Although no southwestern willow flycatchers have been recorded during protocol surveys conducted as of June 2008, the use of a limited construction period or directional drilling will temporarily or spatially, respectively, avoid potential indirect impacts to this subspecies from construction noise and activities. .
- Arroyo toad has been documented approximately 0.5 mile east of the Site and almost 1.0 mile south of the Site. This species breeds in shallow, sandy, low-gradient streams adjacent to stands of cottonwood, sycamore, and willow. Some populations of arroyo toad occur in streams within coniferous forest. Areas that will be disturbed for Project construction lack suitable breeding habitat for this species. However, a habitat assessment conducted by Cadre Environmental identified the presence of suitable upland habitat for this species in the riparian forest on either side of the dirt road that traverses this area. No other suitable aestivation habitat occurs south of SR 76, but individuals could cross unsuitable habitats while foraging or searching for suitable aestivation habitat. Consequently, a limited construction period (i.e., August 1 to January 31) will be utilized to avoid potential impacts to this species during its active season.

There are no CNDDDB occurrence records within the Project vicinity for the following special-status wildlife species: Dulzura pocket mouse, pallid bat, San Diego desert woodrat, Stephen's kangaroo rat, western mastiff bat, western yellow bat, Bell's sage sparrow, coastal California gnatcatcher, Cooper's hawk, Southern California rufous-crown sparrow, yellow warbler, San Diego horned lizard, northern red diamond rattlesnake, coastal rosy boa, two-striped garter snake, and Quino checkerspot butterfly. Although the southern riparian forest, open coast live oak woodland, Diegan coastal sage scrub, non-native grassland, southern cottonwood willow riparian forest, and rock outcrops within the Project vicinity may provide suitable habitat for these species, these habitat types, with the exception of Diegan coastal sage scrub, will not be impacted by Project construction. Therefore, with the exception of the species that have already been addressed and documented to occur in or immediately adjacent to the Project linear corridor (e.g., coastal California gnatcatcher, San Diego horned lizard, and northern red diamond rattlesnake), there is no available data on other special-status species to suggest that they will be significantly impacted by the Project.

As referenced in the preceding paragraphs, Project impacts on special-status species will be minimized to ensure that the Project will not have substantial adverse impacts on any special-status species. Minimization efforts include protocol-level surveys to locate special-status species that could be impacted by construction activities, use of limited construction periods to avoid the active seasons of special-status species that could be adversely impacted by construction activities, directional drilling of specific reaches of the natural gas pipeline corridor to avoid indirect adverse impacts on adjacent special-status species (e.g., from noise impacts), use of passive escape ramps in trenches left open over night, and use of a biological monitor to remove wildlife species that enter the trench during active construction.

6.6.2.2.3 Riparian and Wetland Habitat

Project construction will not occur within any riparian or wetland habitats. The proposed natural gas pipeline will be installed within an abandoned road surrounded by riparian habitat immediately south of SR 76. Project construction will impact the road, but may also involve some limited removal of branches that overhang the road during construction (and only if this reach of the pipeline is trenched). Project construction will not affect any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the CDFG or USFWS in any other way. Habitats occurring in the Site vicinity are shown in Figure 6.6-5.

6.6.2.2.4 Wildlife Nursery Sites and Corridors

Project construction will not impact any surface water bodies. Therefore, it will not affect any fish species. In addition, there are no identified resident or migratory wildlife corridors that will be blocked by Project construction. Trenching within the coastal sage scrub located in the Project linear corridor immediately west of the Site may result in a short-term barrier to the movement of terrestrial species, but will last only until the trench is backfilled and is expected to involve only short reaches of trench at any given time. Therefore, the potential impact is considered temporary and less than significant.

Project construction will not prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction or survival. Therefore, no impacts from Project construction will occur to wildlife nursery sites, migration or dispersal corridors, or other important wildlife linkages.

6.6.2.2.5 *Established Plans, Policies and Ordinances*

Project construction will be consistent with established laws, ordinances, regulations and standards LORS (See Section 6.6.5, Laws, Ordinances, Regulations and Standards).

6.6.2.2.6 *Significance Summary*

Given that Project construction will only occur for approximately 6 months and involve the implementation of identified impact avoidance and minimization measures for potential impacts to special-status species, the Project will not have a substantial adverse impact on any special-status species. The Project will result in impacts to 7.87 acres of Diegan Coastal Sage Scrub, but this impact is considered less than significant with the acquisition of a Habitat Loss Permit from the DPLU and compliance with all associated permit conditions. The Project will not impact any other sensitive natural community or wetlands. It will not interfere with wildlife movement or impede the use of native wildlife nursery sites. The Project will conform to applicable LORS. Thus, Project construction impacts to biological resources will be less than significant.

6.6.2.3 Operations and Maintenance Impacts and Mitigation

6.6.2.3.1 *Special-status Species*

Project operations and maintenance are not expected to result in any direct impacts to special-status species since there will be no new surface disturbance associated with these activities. Furthermore, the underground design of the electric transmission line interconnection will avoid the potential for transmission line collisions by avian species. Portions of the Site will be planted vegetation to stabilize soils and to help screen the power plant from public view. Native tree, shrub, and grass species will be used for project landscaping.

Project operations and maintenance will include emission control measures to comply with relevant air quality standards, which will also protect biological resources from indirect impacts from operations emissions. The Project will utilize acoustical enclosures around noisy equipment to limit noise emissions. Noise levels will be below applicable standards, which will protect biologic resources from significant indirect impacts from noise. Wildlife, if any, that is disturbed by noise from Project operations and maintenance should be able to relocate to adjacent lands. Project operations and maintenance impacts on wildlife from emissions and noise are therefore expected to be less than significant.

The Project linear facilities will be located underground and their operation will not affect biological resources.

The FPUD will provide water for Project operations. Since the water will be from an existing municipal supply, it will have no impact on biological resources.

Storm water discharges from the Site will be in accordance with BMPs to prevent impacts to storm water quality and to prevent erosion impacts. Wildlife will not be impacted by storm water runoff because of these water quality protection measures and because changes in runoff conditions will be minor.

An educational program will be implemented to enhance workers' awareness in order to protect biological resources. This program will be implemented through mandatory initial training with periodic reinforcement using measures such as biological resources sensitivity reminders, periodic training sessions, posters, or signs. Considering these factors, Project operations and maintenance will not directly or indirectly impact special-status plant or wildlife species or natural vegetation communities.

Based on the above, Project operations and maintenance will not have a significant adverse impact on any special-status species. Based on the preceding analysis, the impacts of Project operations and maintenance on special-status species will be less than significant.

6.6.2.3.2 *Riparian and Wetland Habitat*

Project operations and maintenance will not impact any riparian or wetland habitat since no facilities are located in these habitats. Thus, the Project will not affect any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the CDFG or USFWS. Habitats occurring in the Site vicinity are shown in Figure 6.6-5.

6.6.2.3.3 *Wildlife Nursery Sites and Corridors*

As described in Section 6.6.1, there are no identified wildlife nursery sites or movement corridors in the Project vicinity that could be impacted by the Project. Thus, Project operations and maintenance will not impact these types of biological resources. Considering these factors, Project operations and maintenance activities will have no impact on species movement and nursery sites.

6.6.2.3.4 *Plans, Policies and Ordinances*

Project operations and maintenance will be consistent with established LORS (See Section 6.6.5, Laws, Ordinances, Regulations and Standards).

6.6.2.3.5 *Significance Summary*

Based on the preceding evaluations, Project operation and maintenance impacts to biological resources will be less than significant.

6.6.2.4 Cumulative Impacts

Cumulative impacts refer to incremental, individual environmental effects of two or more projects when considered together. These impacts taken individually may be minor, but may be collectively significant. A cumulative impact to biological resources may occur if the contribution of the Project and other projects has the potential to 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, thereby threatening to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal species.

The Site occurs on orchard land zoned for General Agriculture that includes a de minimis amount of disturbed Diegan coastal sage scrub. This land has low to moderate habitat value and provides only low-quality foraging opportunities for local wildlife species. The removal of the orchard and non-native grassland at the Site will incrementally reduce the amount of disturbed low productivity habitat available throughout the region. The linear facilities will impact Diegan coastal sage scrub and disturbed habitat. The impact from the linear facilities is considered temporary. The areas will be stabilized as part of the post construction measures and are expected to revegetate. In addition, mitigation for coastal sage scrub impacts will be provided through the HLP process. No habitat fragmentation impacts will occur and wildlife movement will not be precluded or otherwise significantly impacted.

Other projects that could potentially contribute to cumulative impacts are identified in Section 6.1.3. The Project will not contribute to impacts to wetlands or riparian vegetation. It also will not contribute to the blocking of animal movement or restriction of the range of any species, in part because the Site is surrounded by large expanses of higher quality natural habitat and agricultural land. The Project will not conflict with LORS. The Project will not contribute to impacts to fish species or water bodies. Therefore, there is no potential for cumulative impacts related to these biological resources. The Project, when considered in conjunction with other projects identified in Section 6.1.3, will not reduce the habitat of a wildlife species, cause a wildlife population to drop below self-sustaining levels, or threaten to eliminate any natural communities. Considering these factors, cumulative impacts related to biological resources will be less than significant.

6.6.2.5 Project Design Features

The following Site characteristics and Project design features limit the impacts to biological resources to a level that is less than significant:

- The Site was selected so that Project site construction and operations will occur within an abandoned orchard, disturbed habitat, and developed land, to limit the removal of natural vegetation or wildlife habitat.
- Limited construction periods will be used to avoid the active season of federally-listed species that occur along some portions of the Project linear corridor or the

- reaches of the corridor adjacent to these resources will be directionally drilled to avoid potential indirect impacts from noise and construction activities.
- Passive escape ramps will be used in trenches that will be left open over night to allow trapped wildlife to escape.
 - Biological monitors will be utilized to remove and relocate wildlife that become trapped in open trenches during active construction.
 - The Project has been designed to avoid impacts to drainages since directional drilling will be used to go under such drainages.
 - Project landscaping will use only native vegetation to avoid introducing exotic plants to the Site or surrounding areas.
 - The electrical interconnection to the existing SDG&E substation will be installed underground, which will eliminate the potential for avian collisions with the transmission line.
 - Project lighting will be directed downward to minimize effects to wildlife.
 - Project construction and operation will include emission control measures to comply with relevant air quality standards, which also will protect biologic resources.
 - Relevant standards for noise control will be followed during construction and operations. Also implementation of these standards will protect biologic resources from the indirect impacts from noise.
 - Project design includes a preconstruction clearance survey and an employee education program to assure that special-status species are not adversely impacted.
 - The Project will comply with California Pesticide Regulations (California Code of Regulations (CCR) Title 3, Division 6) to minimize the use of rodenticides and herbicides.

6.6.3 Significant Unavoidable Adverse Impacts

Due to Project design features and Site characteristics, the Project will not have significant unavoidable adverse impacts on biological resources.

6.6.4 Laws, Ordinances, Regulations and Standards

LORS related to biological resources that are relevant to the Project are listed in Table 6.6-6, along with an identification of the administering agencies and Project approach to compliance. The Project will comply with applicable LORS during construction and operation.

The CDFG may consider the transmission line interconnection horizontal drilling beneath the drainage west of the site to be within their jurisdiction, and may require a Streambed Alteration Agreement pursuant to Fish and Game Code section 1602. The Applicant will address this potential requirement with CDFG staff. Table 6.6-7 provides contact information for CDFG.

Table 6.6-5 – Summary of Biological Resources LORS and Compliance

JURIS-DICTION	AUTHORITY ¹	AGENCY	REQUIREMENTS	COMPLIANCE	AFC SECTIONS AND PAGES
Federal	ESA of 1973; 16 United States Code (USC) §1531 et seq., 50 Code of Federal Regulations (CFR) Parts 17 and 222.	USFWS	Protection and management of federally-listed threatened or endangered plants and animals and their designated critical habitats (terrestrial and avian species).	The Project will not impact federally protected species. Avoidance and minimization measures are incorporated into the Project.	6.6.1, 6.6.1.3.2, 6.6.1.4.5, 6.6.2.2, 6.6.2.3, and 6.6.2.5 Pages 6.6-1 to 6.6-43, 6.6-3 to 6.6-31, 6.6-42 to 6.6-43, 6.6-44 to 6.6-54, 6.6-54 to 6.6-55
	Migratory Bird Treaty Act; 16 USC §703-711; 50 CFR Subchapter B.	USFWS	Protection of migratory birds.	The Project will not impact migratory birds. An underground transmission line will eliminate any potential for bird collisions with transmission wires.	6.6.1.3.1, 6.6.1.3.2, 6.6.1.4.4, 6.6.1.4.5, 6.6.2.2.1, 6.6.2.3.1, and 6.6.2.5 Pages 6.6-3 to 6.6-31, 6.6-41 to 6.6-43, 6.6-45 to 6.6-48, 6.6-52 to 6.6-53, 6.6-54 to 6.6-55
	Fish and Wildlife Conservation Act, 16 USC Section 2901 et seq.; 50 CFR part 83.	USFWS	Calls on states to develop conservation plans for fish and wildlife.	There are no conservation plans applicable to the Site vicinity.	6.6.2.2.3 and 6.6.2.3.4 Pages 6.6-53
	Bald and Golden Eagle Protection Act 16 U.S.C. §§ 668-668d, 54 Stat. 250.	USFWS	Prohibits the take, transport or sale of bald eagles, their eggs or any part of an eagle except where expressly allowed by the Secretary of Interior. The Act was amended in 1962 to extend the prohibitions to the golden eagle.	The Project will not result in take of bald or golden eagle.	6.6.1.3.2, 6.6.1.4.5, 6.6.2.2, 6.6.2.3, and 6.6.2.5 Pages 6.6-3 to 6.6-31, 6.6-42 to 6.6-53, 6.6-44 to 6.6-55

¹ Pursuant to 20 CCR Chapter 5 Appendix B Section (i)(1)(B): Each agency with jurisdiction to issue applicable permits and approvals or to enforce identified LORS and adopted local, regional and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the CEC to certify sites and related facilities.

JURIS-DICTION	AUTHORITY ¹	AGENCY	REQUIREMENTS	COMPLIANCE	AFC SECTIONS AND PAGES
State	California ESA of 1984; California Fish & Game Code §2050-2098.	CDFG	Consultation requirement for threatened or endangered species. Endangered plants and animals are listed in 14 CCR §670.2 and 670.5.	Provide information to CDFG through the Application for Certification (AFC) process. Implement appropriate measures, if any, developed in consultation with CDFG.	6.6.2.2.1, 6.6.2.3.1 and 6.6.2.5 Pages 6.6-45 to 6.6-48, 6.6-52 to 6.6-53, 6.6-54 to 6.6-55
	Native Plant Protection Act of 1977; California Fish and Game Code §1900 et seq.	CDFG	Protection for plants listed as rare or endangered.	Provide information to CDFG through the AFC process regarding lack of impact of native plant species and show compliance with the California Native Plant Protection Act.	6.6.1.3.2, 6.6.1.4.5 Pages 6.6-3 to 6.6-31, 6.6-42 to 6.6-43
	California Fish and Game Code §1930-1933.	CDFG, Natural Heritage Division	Provides for significant Natural Areas program and natural resources database.	Provide information to CDFG through the AFC process regarding lack of impact to "Natural Areas" and show compliance with the Natural Heritage Division requirements.	6.6.1.2.2, 6.6.1.4.2, 6.6.1.4.3 and 6.6.2.5 Pages 6.6-3, 6.6-32 to 6.6-34, 6.6-54 to 6.6-55
	California Fish and Game Code §3503.	CDFG	No taking or possessing of nests or eggs of birds.	Provide information to CDFG through the AFC process regarding lack of impact to nesting birds protected under Section 3503 of the California Fish and Game Code.	6.6.1.4.2, 6.6.1.4.3, 6.6.1.4.5, 6.6.2.2, 6.6.2.3 and 6.6.2.5 Pages 6.6-32 to 6.6-41, 6.6-42 to 6.6-43, 6.6-44 to 6.6-54, 6.6-54 to 6.6-55
	California Fish and Game Code §3511.	CDFG	Prohibits the taking of any bird listed as fully protected.	Provide information to CDFG through the AFC process regarding lack of "taking" of protected bird species in accordance with Section 3511 of the California Fish and Game Code.	6.6.1.4.2, 6.6.1.4.3, 6.6.1.4.5, 6.6.2.2, 6.6.2.3 and 6.6.2.5 Pages 6.6-32 to 6.6-41, 6.6-42 to 6.6-43, 6.6-44 to 6.6-54, 6.6-54 to 6.6-55
	California Fish and Game Code § 3515.	CDFG	Unlawful to take any non-game migratory bird designated in the Migratory Bird Treaty Act.	Provide information to CDFG through the AFC process regarding lack of "taking" of non-game, migratory birds designated in Migratory Bird Treaty Act.	6.6.1.4.2, 6.6.1.4.3, 6.6.1.4.5, 6.6.2.2, 6.6.2.3 and 6.6.2.5 Pages 6.6-32 to 6.6-41, 6.6-42 to 6.6-43, 6.6-44 to 6.6-54, 6.6-54 to 6.6-55

JURIS-DICTION	AUTHORITY ¹	AGENCY	REQUIREMENTS	COMPLIANCE	AFC SECTIONS AND PAGES
State (Cont'd.)	California Fish and Game Code §§ 4700 and 5515.	CDFG	Prohibits the taking of mammals and fish listed as fully protected.	Provide information to CDFG through the AFC process regarding lack of "taking" of fully protected mammals and fish in accordance with Sections 4700 and 5515 of the California Fish and Game Code.	6.6.1.4.2, 6.6.1.4.3, 6.6.1.4.5, 6.6.2.2, 6.6.2.3 and 6.6.2.5 Pages 6.6-32 to 6.6-41, 6.6-42 to 6.6-43, 6.6-44 to 6.6-54, 6.6-54 to 6.6-55
	California Fish and Game Code §5050.	CDFG	Prohibits the taking of any reptile listed as fully protected.	Provide information to CDFG through the AFC process regarding lack of "taking" of fully protected reptile species in accordance with Section 5050 of the California Fish and Game Code.	6.6.1.4.2, 6.6.1.4.3, 6.6.1.4.5, 6.6.2.2, 6.6.2.3 and 6.6.2.5 Pages 6.6-32 to 6.6-41, 6.6-42 to 6.6-43, 6.6-44 to 6.6-54, 6.6-54 to 6.6-55
	CEQA; California PRC §21000 et seq.	California Energy Commission (CEC)	Protection of California environment.	Provide information to the CEC through the AFC process showing protection of the environment and impact from the Project.	6.6.2.2, 6.6.2.3 and 6.6.2.5 Pages 6.6-44 to 6.6-54, 6.6-54 to 6.6-55
	California PRC §25523(a); 20 CCR §1752,1752.5, 2300-2309 and Chapter 2, Subchapter 5, Article I, Appendix B, Part (i).	CEC, with comment by CDFG.	Inclusion of requirements for CEC decision on AFC to assure protection of listed species.	Provide information to the CEC through the AFC process regarding lack of impact to listed species and how the Project protects listed species.	6.6.1.4.2, 6.6.1.4.3, 6.6.1.4.4, 6.6.1.4.5, 6.6.2.2, 6.6.2.3 and 6.6.2.5 Pages 6.6-32 to 6.6-41, 6.6-41 to 6.6-43, 6.6-44 to 6.6-55
	California Pesticide Regulations, 3 CCR, Division 6.	California Department of Pesticide Regulation	Requires minimizing the use of rodenticides and herbicides.	The Project will include measures requiring compliance with California Pesticide Regulation (3 CCR, Division 6) to minimize the use of rodenticides and herbicides.	6.6.2.5 Pages 6.6-54 to 6.6-55
	California Native Species Conservation and Enhancement Act, CDFG Code Section 1750 et seq.	CDFG	Mandates maintenance of sufficient populations of native species to ensure continued existence.	Provide information to CDFG through the AFC process regarding lack of impact to native species in accordance with Section 1750 et seq. of the California Fish and Game Code.	6.6.1.4.2, 6.6.1.4.3, 6.6.1.4.5, 6.6.2.2, 6.6.2.3 and 6.6.2.5 Pages 6.6-32 to 6.6-41, 6.6-42 to 6.6-43, 6.6-44 to 6.6-54, 6.6-54 to 6.6-55

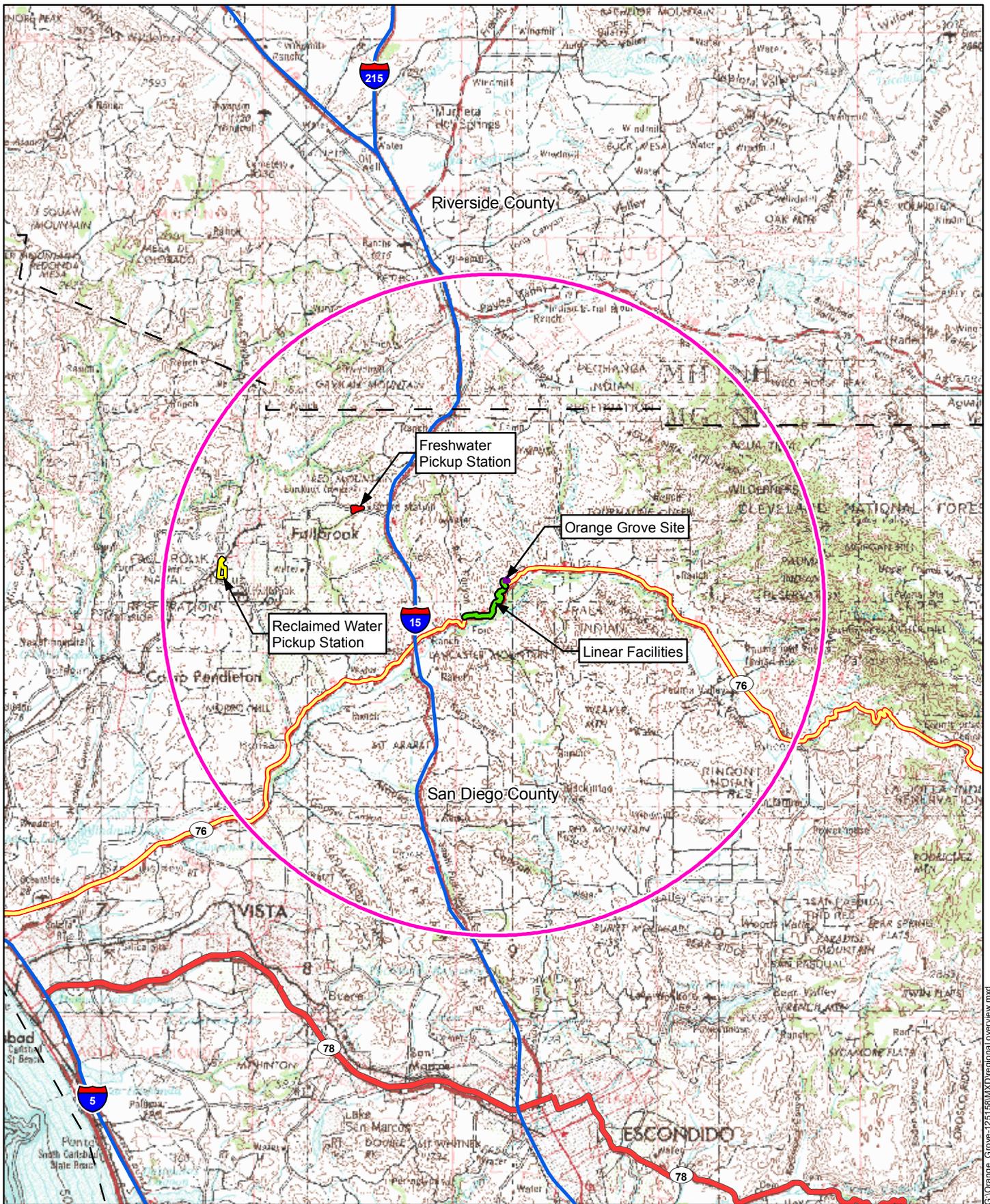
JURIS-DICTION	AUTHORITY ¹	AGENCY	REQUIREMENTS	COMPLIANCE	AFC SECTIONS AND PAGES
State (Cont'd.)	Natural Community Conservation Planning Act of 1991	CDFG	Provides for comprehensive management and conservation of key natural resources to protect and perpetuate natural wildlife diversity while allowing compatible and appropriate development and growth.	Provide information to CDFG through the AFC process regarding lack of impact to, and protecting and perpetuating, natural wildlife diversity.	6.6.1.4.2, 6.6.1.4.3, 6.6.1.4.5, 6.6.2.2, 6.6.2.3 and 6.6.2.5 Pages 6.6-32 to 6.6-41, 6.6-42 to 6.6-43, 6.6-44 to 6.6-54, 6.6-54 to 6.6-55
Local	San Diego County General Plan – Open Space Element (Part 1), Conservation Element (Part X), and Community and Subregional Plans	County of San Diego	Provides guiding principles for the conservation of biological resources, such as water, vegetation, and wildlife habitat.	Provide information to the CEC through the AFC process regarding lack of impact to protected and environmentally sensitive habitat areas in accordance with the policies of the County’s Guidelines for Determining Significance.	6.6.1.4.2, 6.6.1.4.3, 6.6.1.4.5, 6.6.2.2, 6.6.2.3 and 6.6.2.5 Pages 6.6-32 to 6.6-41, 6.6-42 to 6.6-43, 6.6-44 to 6.6-54, 6.6-54 to 6.6-55
	County of San Diego Zoning Ordinance	County of San Diego	Designates zoning or Special Area Regulation with certain restrictions pursuant to the Zoning Ordinance.	Provide information to the CEC through the AFC process regarding the zoning designation of the Project.	6.6.1.4, 6.6.2. 6.6.2 Pages 6.6-31 to 6.6-43, 6.6-43 to 6.6-55
	Multiple Species Conservation Program and Biological Mitigation Ordinance	County of San Diego	Establishes a connected preserve system that protects the County’s sensitive species and habitats.	The Project is not located within the County MSCP boundaries.	6.6.1, 6.6.2 Pages 6.6-1 to 6.6-55
	Resource Protection Ordinance	County of San Diego	Provides restrictions for impacting wetlands, wetland buffers, floodplains, steep slopes, sensitive habitat lands, and historical sites.	Provide information to the CEC through the AFC process regarding lack of impact to wetlands, wetland buffers, steep slopes, and sensitive habitat lands.	6.6.1, 6.6.2 Pages 6.6-1 to 6.6-55
	Habitat Loss Permit Ordinance	County of San Diego	Provides means for the County to issue “take permits” in lieu of USFWS Section 7 or 10(a) Permits.	Project will obtain a Habitat Loss Permit for direct and indirect impact to coastal sage scrub habitat and associated special-status species (e.g., coastal California gnatcatcher)	6.6.2.2, 6.2.2.3 Pages 6.6-58 to 6.6-54
Industry	None Applicable	None Applicable	None Applicable	None Applicable	None Applicable

Table 6.6-6 – Agency Contacts for Biological Resources

AGENCY	AUTHORITY
California Department of Fish and Game South Coast Region 4949 Viewridge Avenue San Diego, California 92123 T. Spear (858) 467-4223	Potential need for Streambed Alteration Agreement, per Fish and Game Code section 1602

6.6.5 References

- CNDDDB. Computer software. California Department of Fish and Game Wildlife and Habitat Data Analysis Branch, 2007. CD-ROM.
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- Terrain Navigator Pro. Computer software. Maptech, 2003. PC, Windows 2000 or XP, CD-ROM.
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G:\Orange_Grove-1251631\MXD\regional overview.mxd

 10 Mile Radius



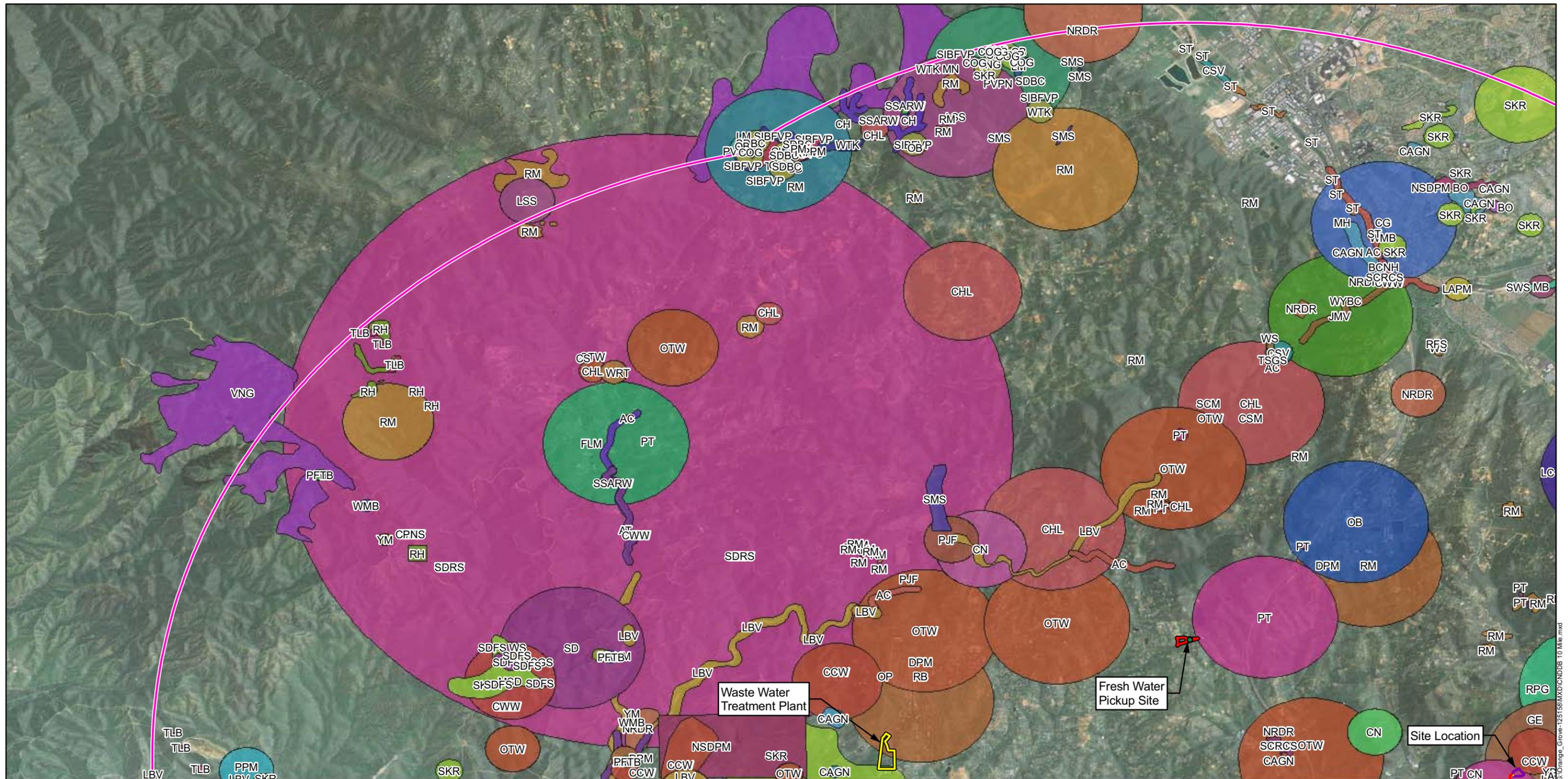
Figure 6.6-1
Regional Overview
Orange Grove
Project

1" = 3 Miles



Source:
USGS topographical Quadrangles 250K: Santa Ana





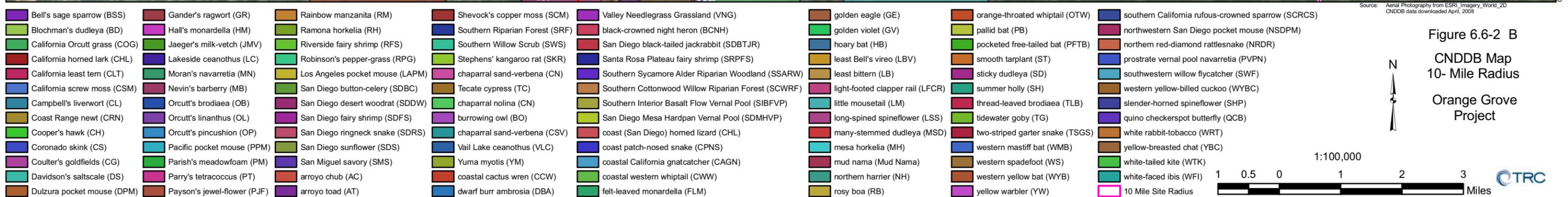
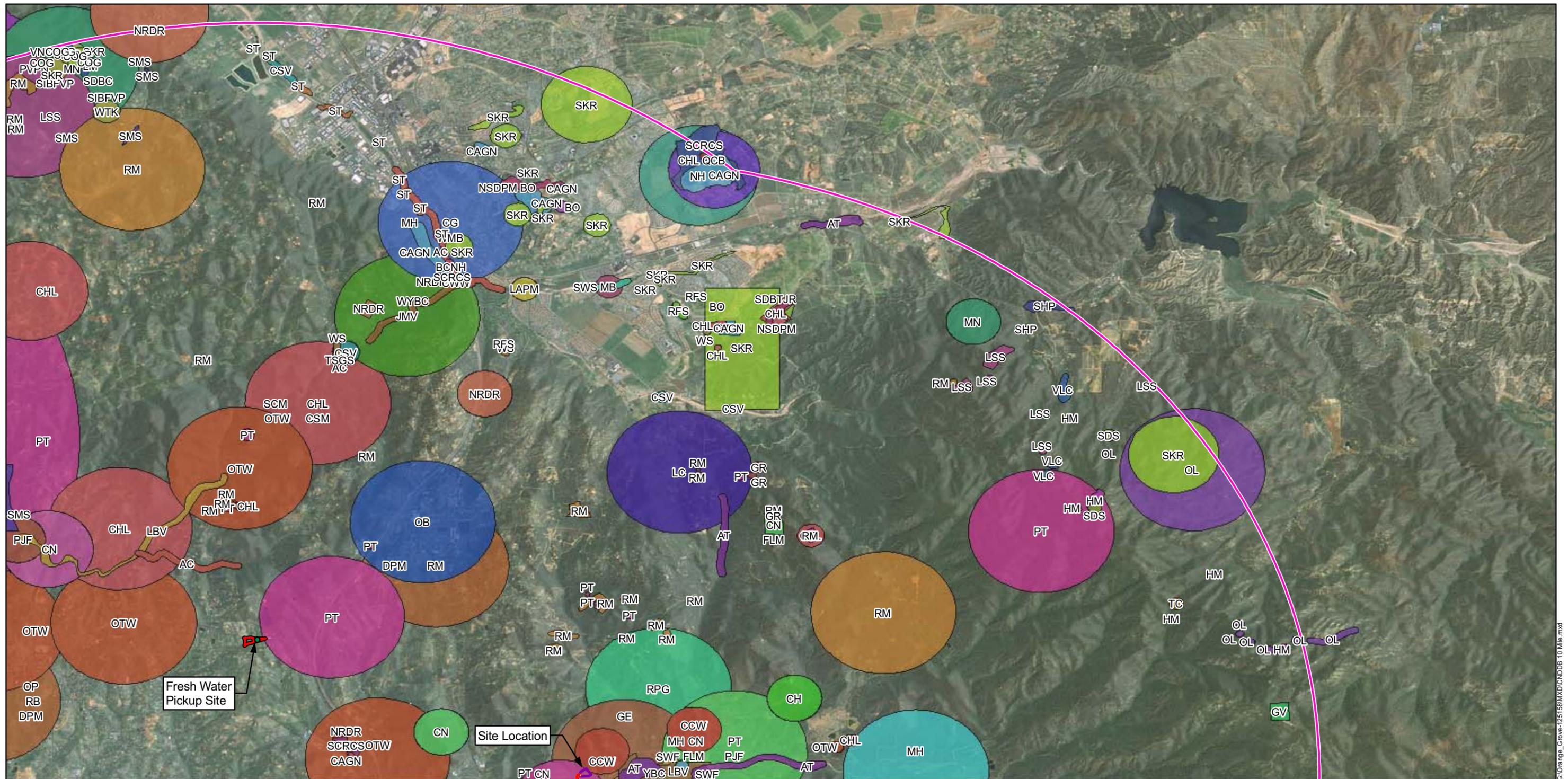
Bell's sage sparrow (BSS)	Gander's ragwort (GR)	Rainbow manzanita (RM)	Shevock's copper moss (SCM)	Valley Needlegrass Grassland (VNG)	golden eagle (GE)	orange-throated whiptail (OTW)	southern California rufous-crowned sparrow (SCRCS)
Blochman's dudleya (BD)	Hall's monardella (HM)	Ramona horkelia (RH)	Southern Riparian Forest (SRF)	black-crowned night heron (BCNH)	golden violet (GV)	pallid bat (PB)	northwestern San Diego pocket mouse (NSDPM)
California Orcutt grass (COG)	Jaeger's milk-vetch (JMV)	Riverside fairy shrimp (RFS)	Southern Willow Scrub (SWS)	San Diego black-tailed jackrabbit (SDBTJR)	hoary bat (HB)	pocketed free-tailed bat (PFTB)	northern red-diamond rattlesnake (NRDR)
California horned lark (CHL)	Lakeside ceanothus (LC)	Robinson's pepper-grass (RPG)	Stephens' kangaroo rat (SKR)	Santa Rosa Plateau fairy shrimp (SRPFS)	least Bell's vireo (LBV)	smooth tarplant (ST)	prostrate vernal pool navarretia (PVPN)
California least tern (CLT)	Moran's navarretia (MN)	Los Angeles pocket mouse (LAPM)	chaparral sand-verbena (CN)	Southern Sycamore Alder Riparian Woodland (SSARW)	least bittern (LB)	sticky dudleya (SD)	southwestern willow flycatcher (SWF)
California screw moss (CSM)	Nevin's barberry (MB)	San Diego button-celery (SDBC)	Tecate cypress (TC)	Southern Cottonwood Willow Riparian Forest (SCWRF)	light-footed clapper rail (LFCR)	summer holly (SH)	western yellow-billed cuckoo (WYBC)
Campbell's liverwort (CL)	Orcutt's brodiaea (OB)	San Diego desert woodrat (SDDW)	chaparral nolina (CN)	Southern Interior Basalt Flow Vernal Pool (SIBFVP)	little mouseltail (LM)	thread-leaved brodiaea (TLB)	slender-horned spineflower (SHP)
Coast Range newt (CRN)	Orcutt's linanthus (OL)	San Diego fairy shrimp (SDFS)	burrowing owl (BO)	San Diego Mesa Hardpan Vernal Pool (SDMHVP)	long-spined spineflower (LSS)	tidewater goby (TG)	quino checkerspot butterfly (QCB)
Cooper's hawk (CH)	Orcutt's pincushion (OP)	San Diego ringneck snake (SDRS)	chaparral sand-verbena (CSV)	coast (San Diego) horned lizard (CHL)	many-stemmed dudleya (MSD)	two-striped garter snake (TSGS)	white rabbit-tobacco (WRT)
Coronado skink (CS)	Pacific pocket mouse (PPM)	San Diego sunflower (SDS)	Vail Lake ceanothus (VLC)	coast patch-nosed snake (CPNS)	mesa horkelia (MH)	western mastiff bat (WMB)	yellow-breasted chat (YBC)
Coulter's goldfields (CG)	Parish's meadowfoam (PM)	San Miguel savory (SMS)	Yuma myotis (YM)	coastal California gnatcatcher (CAGN)	mud nama (Mud Nama)	western spadefoot (WS)	white-tailed kite (WTK)
Davidson's saltscale (DS)	Parry's tetracoccus (PT)	arroyo chub (AC)	coastal cactus wren (CCW)	coastal western whiptail (CWW)	northern harrier (NH)	western yellow bat (WYB)	white-faced ibis (WFI)
Dulzura pocket mouse (DPM)	Payson's jewel-flower (PJF)	arroyo toad (AT)	dwarf burr ambrosia (DBA)	felt-leaved monardella (FLM)	rosy boa (RB)	yellow warbler (YW)	10 Mile Site Radius

Figure 6.6-2 A
 CNDDDB Map
 10- Mile Radius
 Orange Grove
 Project

1 0.5 0 1 2 3 Miles

1:100,000

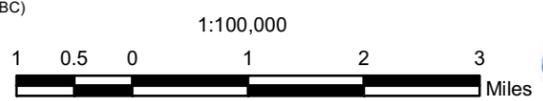
Source: Aerial Photography from ESRI Imagery, World 2D
 CNDDDB data downloaded April, 2008



Source: Aerial Photography from ESRI Imagery_World_2D
 CNDDDB data downloaded April, 2008



Figure 6.6-2 B
 CNDDDB Map
 10- Mile Radius
 Orange Grove
 Project



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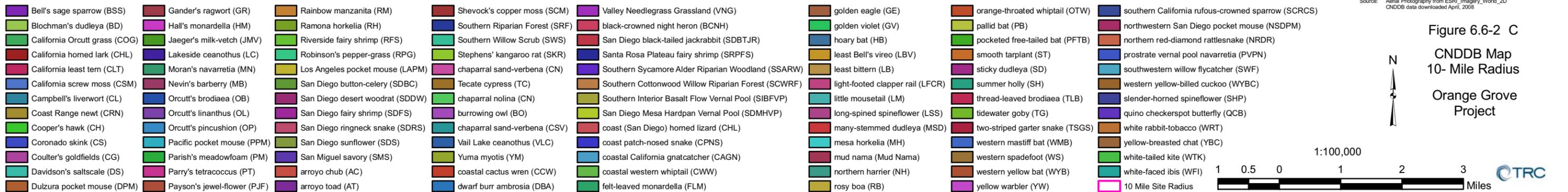
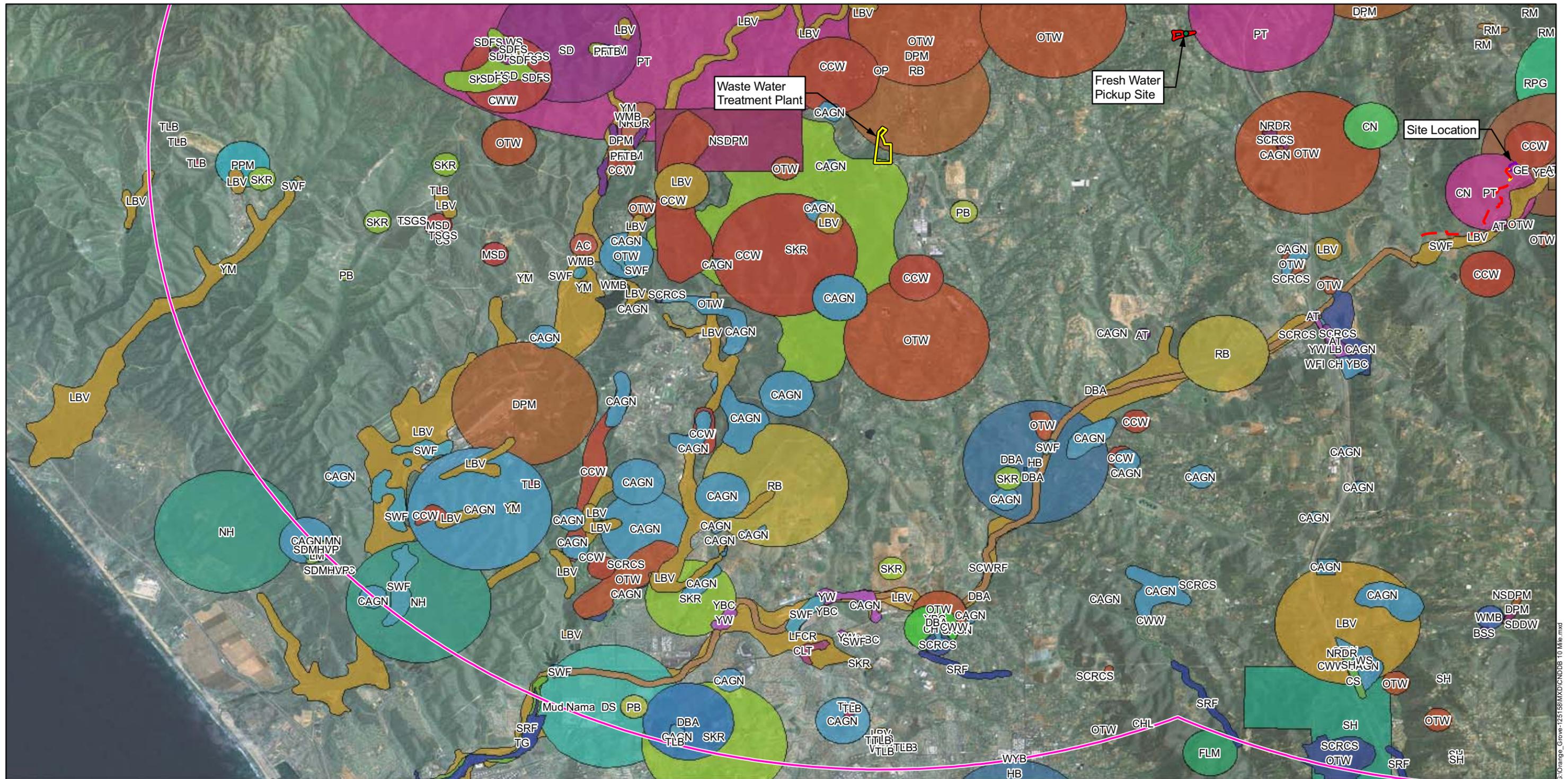
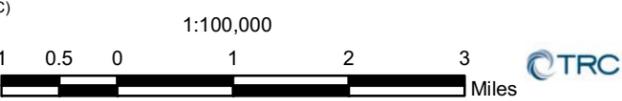
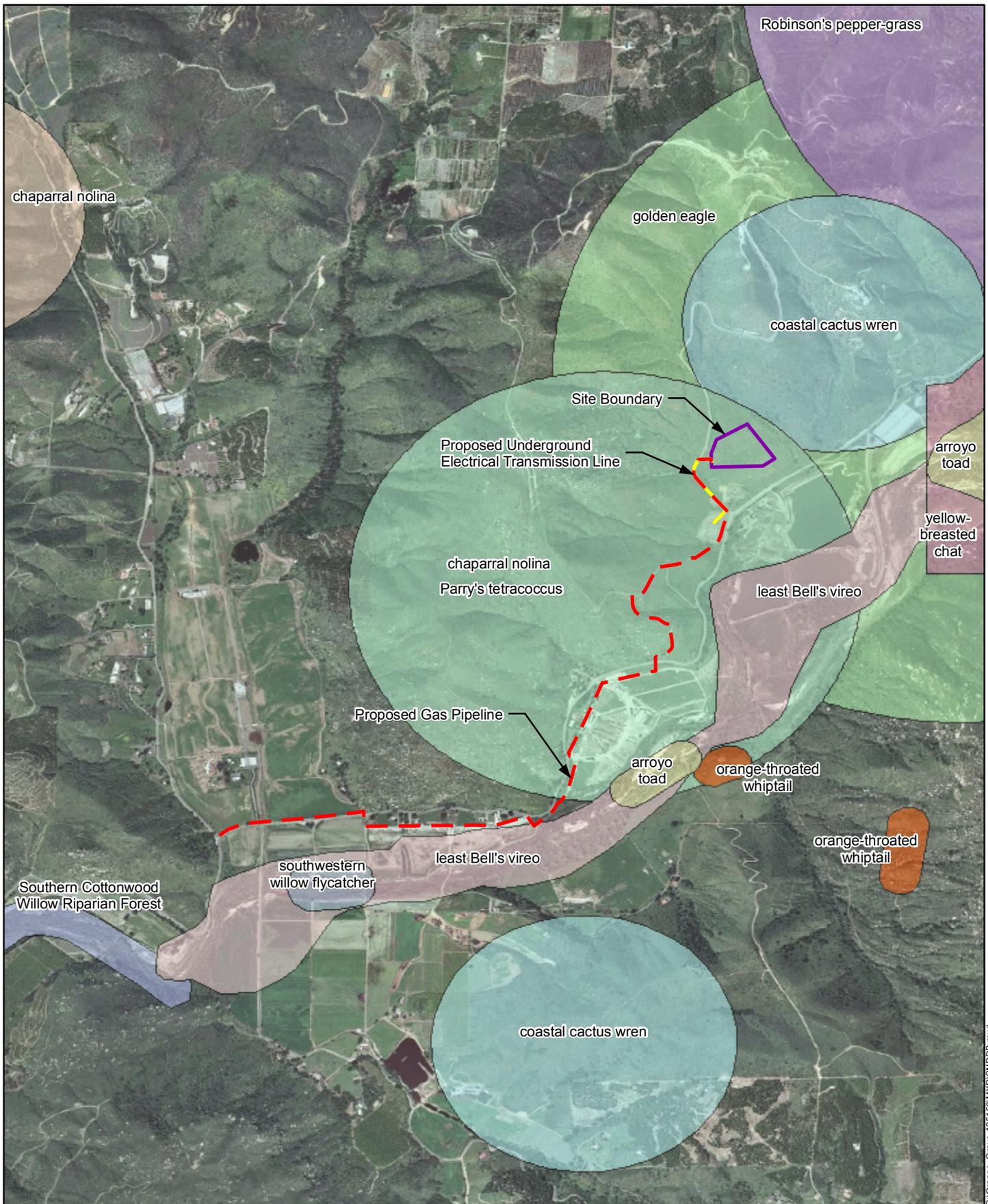


Figure 6.6-2 C
 CNDDB Map
 10- Mile Radius
 Orange Grove
 Project



Source: Aerial Photography from ESRI Imagery_World_2D
 CNDDB data downloaded April, 2008



- | | | |
|--|---|--|
|  Parry's tetracoccus |  chaparral nolina |  orange-throated whiptail |
|  Roberson's pepper-grass |  coastal cactus wren |  southwestern willow flycatcher |
|  Southern Cottonwood Willow Riparian Forest |  golden eagle |  yellow-breasted chat |
|  arroyo toad |  least Bell's vireo | |

Source:
Aerial Photography from ESRI_Imagery_World_2D
CNDDDB data downloaded April, 2008

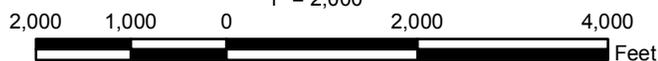
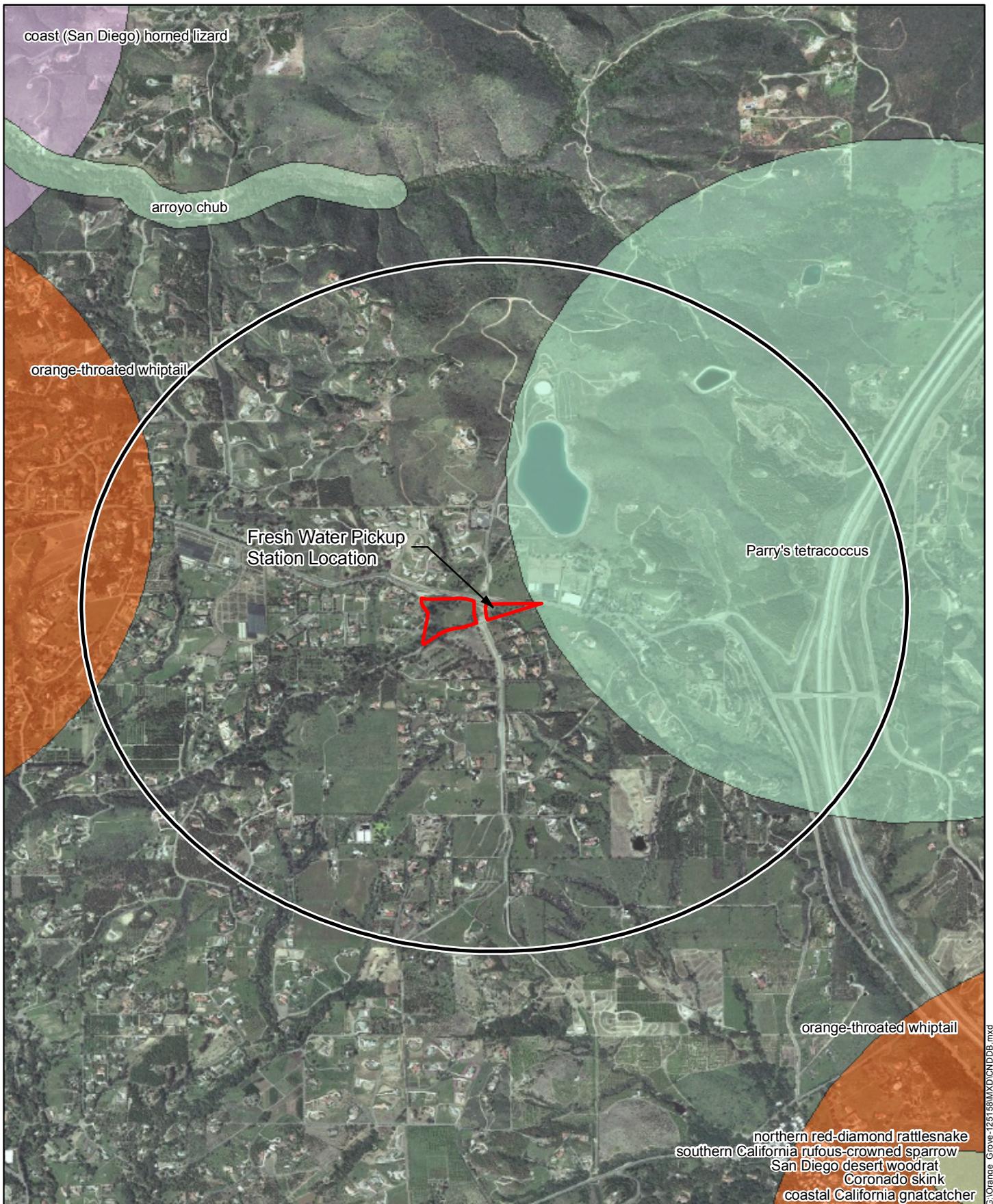


Figure 6.6-3 A
CNDDDB Map
1 Mile Radius
Orange Grove
Project



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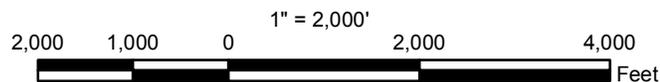
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|--|---|--|
|  Coronado skink |  arroyo chub |  northern red-diamond rattlesnake |
|  Parry's tetracoccus |  coast (San Diego) horned lizard |  orange-throated whiptail |
|  San Diego desert woodrat |  coastal California gnatcatcher |  southern California rufous-crowned sparrow |



Figure 6.6-3 B
 CNDDDB Map
 1 Mile Radius
 Orange Grove
 Project



Source:
 Aerial Photography from ESRI_Imagery_World_2D
 CNDDDB data downloaded April, 2008





- Proposed Gas Line
- Survey Boundary
- Proposed Underground Electrical Transmission Line
- Fresh Water Pickup Station
- Site Location
- Map Sheets

Source:
USGS Topographical Quadrangles: Pala, Bonsall.
Aerial Photography from ESRI Imagery World 2D
Library-Remote Sensing 2005

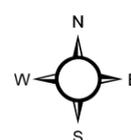
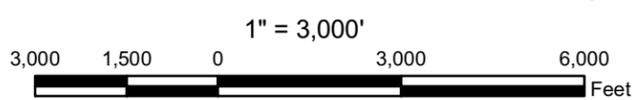
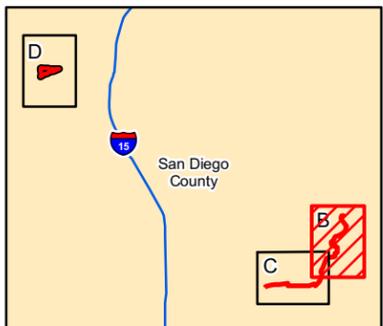
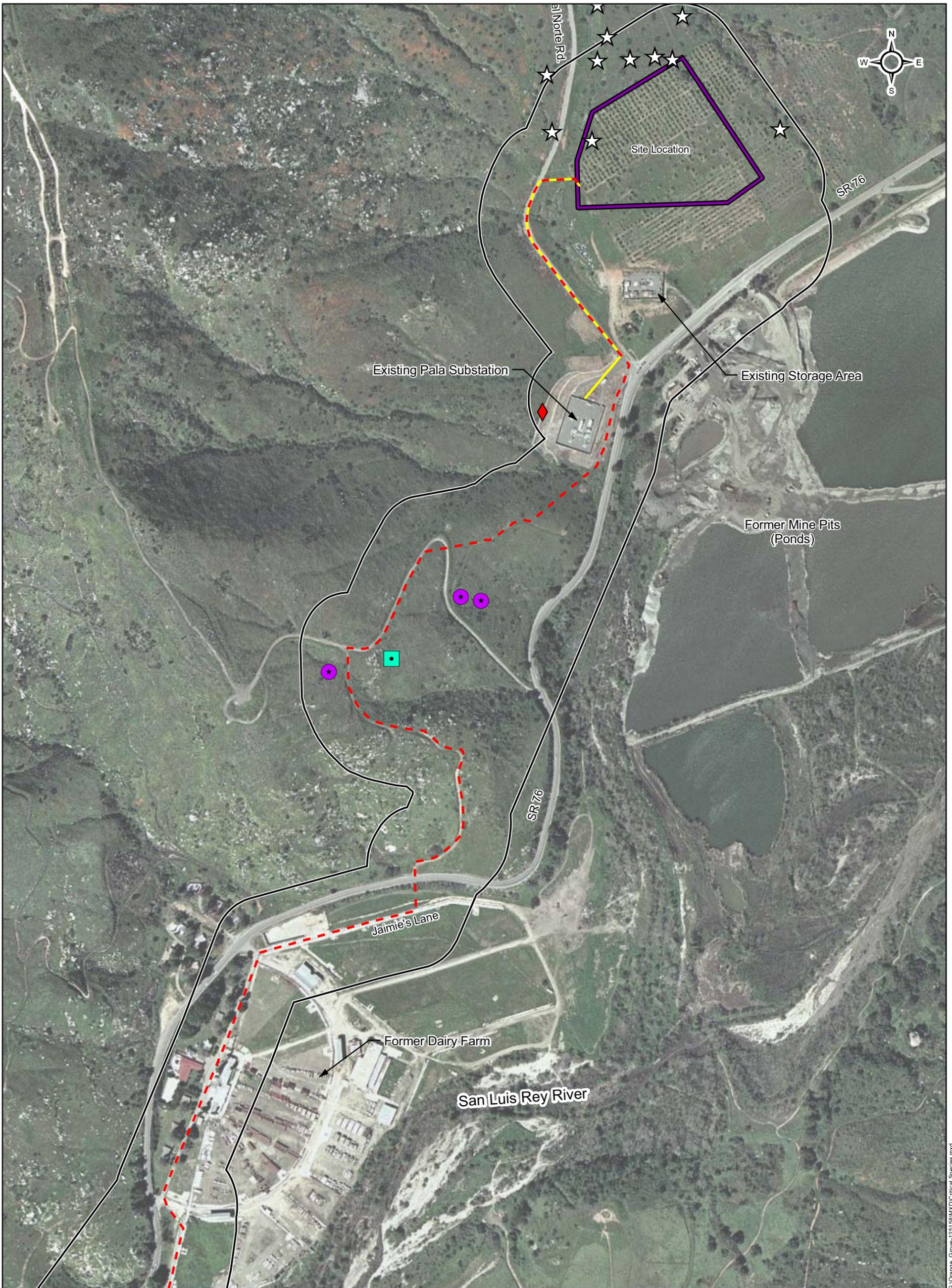


Figure 6.6-4 A
Occurrences of Special-Status
Species Recorded During Field
Surveys of the Site and
Project Linear Corridor
Orange Grove Project





- Proposed Lines
- Underground Electrical Transmission Line
- Survey Area
- Site Boundary
- Fresh Water Pickup Station
- ★ Parry's tetracoccus (*Tetracoccus dioicus*)
- ▲ Least Bell's Vireo
- ✱ Coastal California Gnatcatcher
- ◆ Red Diamond Rattlesnake
- California Horned Lizard

1" = 400'

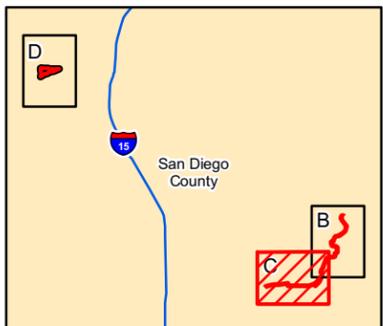


Source: Aerial Photography from ESRI_Imagery_World_2D

Figure 6.6-4 B
 Occurrences of Special-Status Species Recorded During Field Surveys of the Site and Project Linear Corridor
 Orange Grove Project



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- Proposed Lines
- Underground Electrical Transmission Line
- Survey Area
- Site Boundary
- Fresh Water Pickup Station
- ★ Parry's tetracoccus (*Tetracoccus dioicus*)
- ▲ Least Bell's Vireo
- ★ Coastal California Gnatcatcher
- ◆ Red Diamond Rattlesnake
- California Horned Lizard

1" = 400'

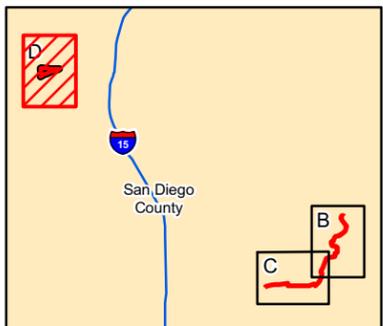


Source: Aerial Photography from ESRI_Imagery_World_2D

Figure 6.6-4 C
 Occurrences of Special-Status Species Recorded During Field Surveys of the Site and Project Linear Corridor
 Orange Grove Project



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- Proposed Lines
- Underground Electrical Transmission Line
- Survey Area
- Site Boundary
- Fresh Water Pickup Station
- ★ Parry's tetracoccus (*Tetracoccus dioicus*)
- ▲ Least Bell's Vireo
- ✱ Coastal California Gnatcatcher
- ◆ Red Diamond Rattlesnake
- California Horned Lizard

Figure 6.6-4 D
 Occurrences of Special-Status
 Species Recorded During Field
 Surveys of the Site and
 Project Linear Corridor
 Orange Grove Project



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- Proposed Gas Line
- Survey Boundary
- Proposed Underground Electrical Transmission Line
- Fresh Water Pickup Station
- Site Location
- Map Sheets

Source:
USGS Topographical Quadrangles: Pala, Bonsall.
Aerial Photography from ESRI Imagery World_2D
Library-Remote Sensing 2005

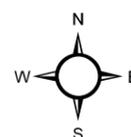
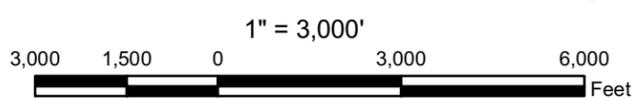


Figure 6.6-5 A
Site Biological Resources
Orange Grove Project



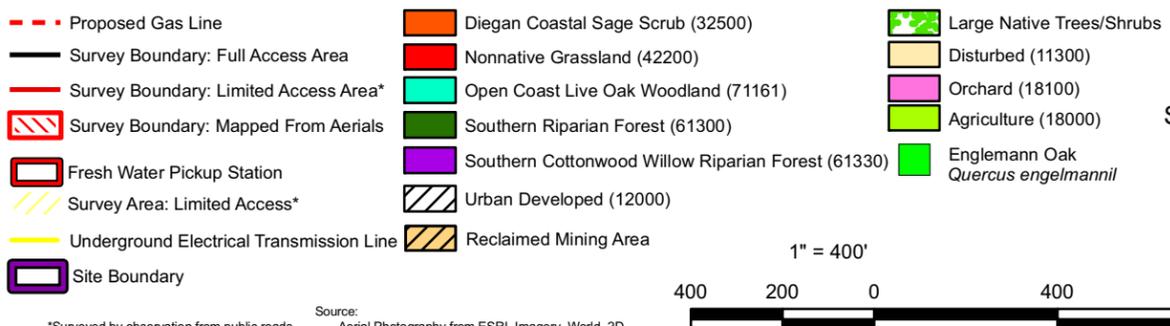
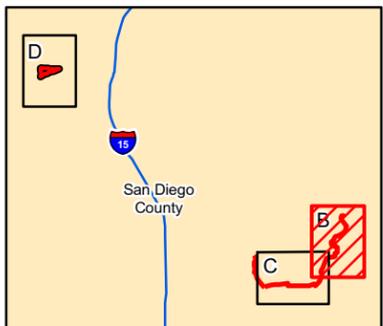
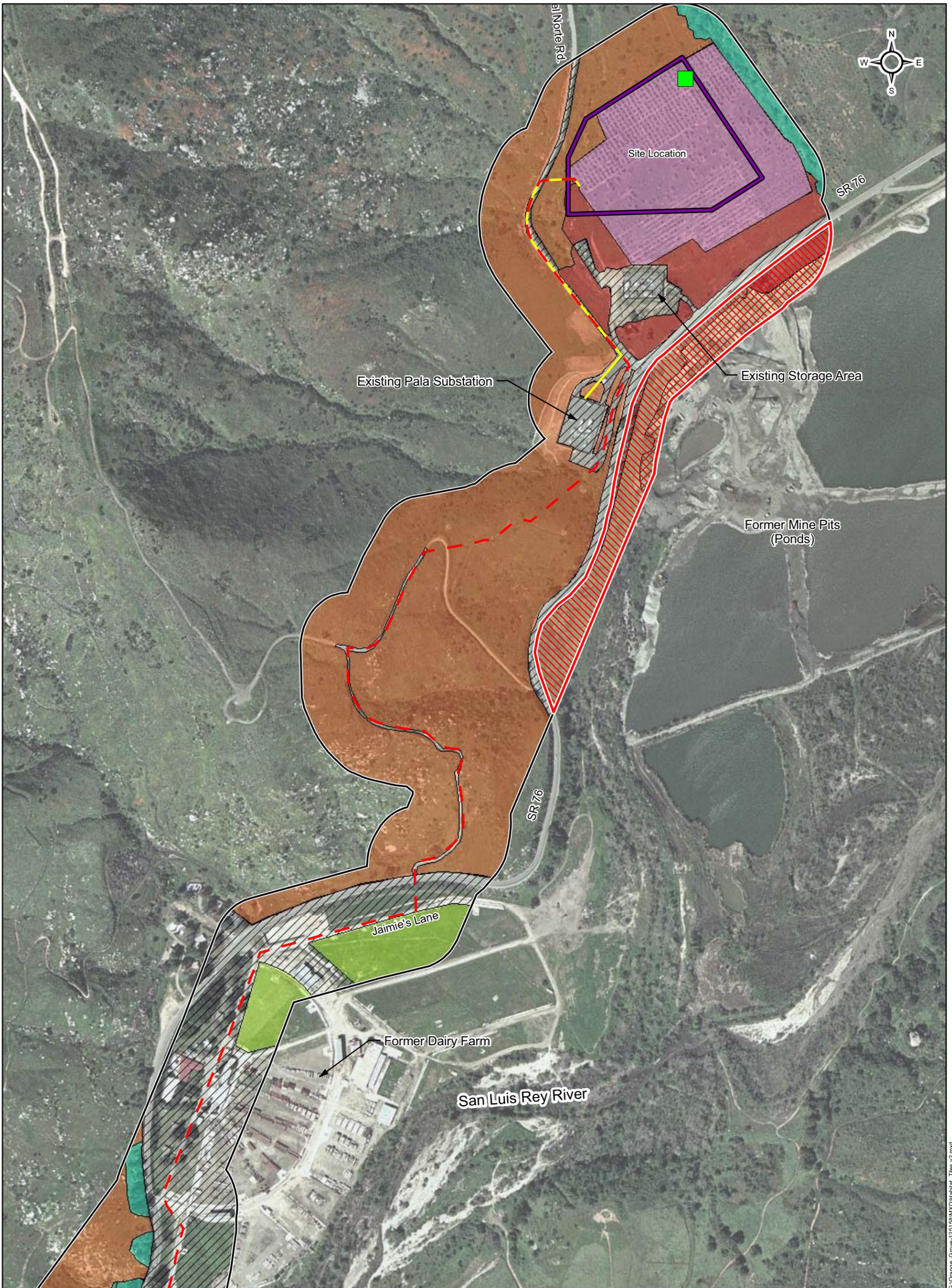


Figure 6.6-5 B
 Site Biological Resources
 Orange Grove Project



*Surveyed by observation from public roads
 Source: Aerial Photography from ESRI_Imagery_World_2D



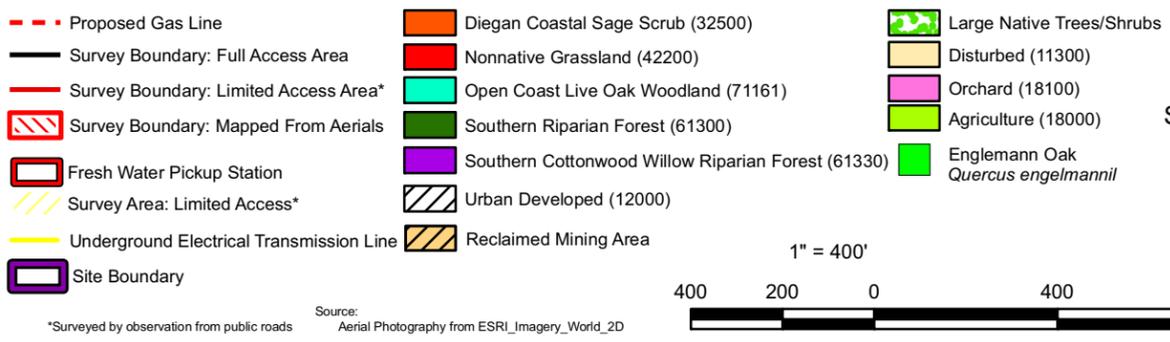
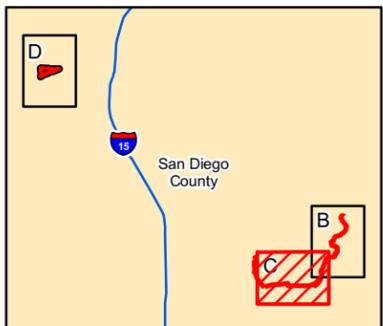
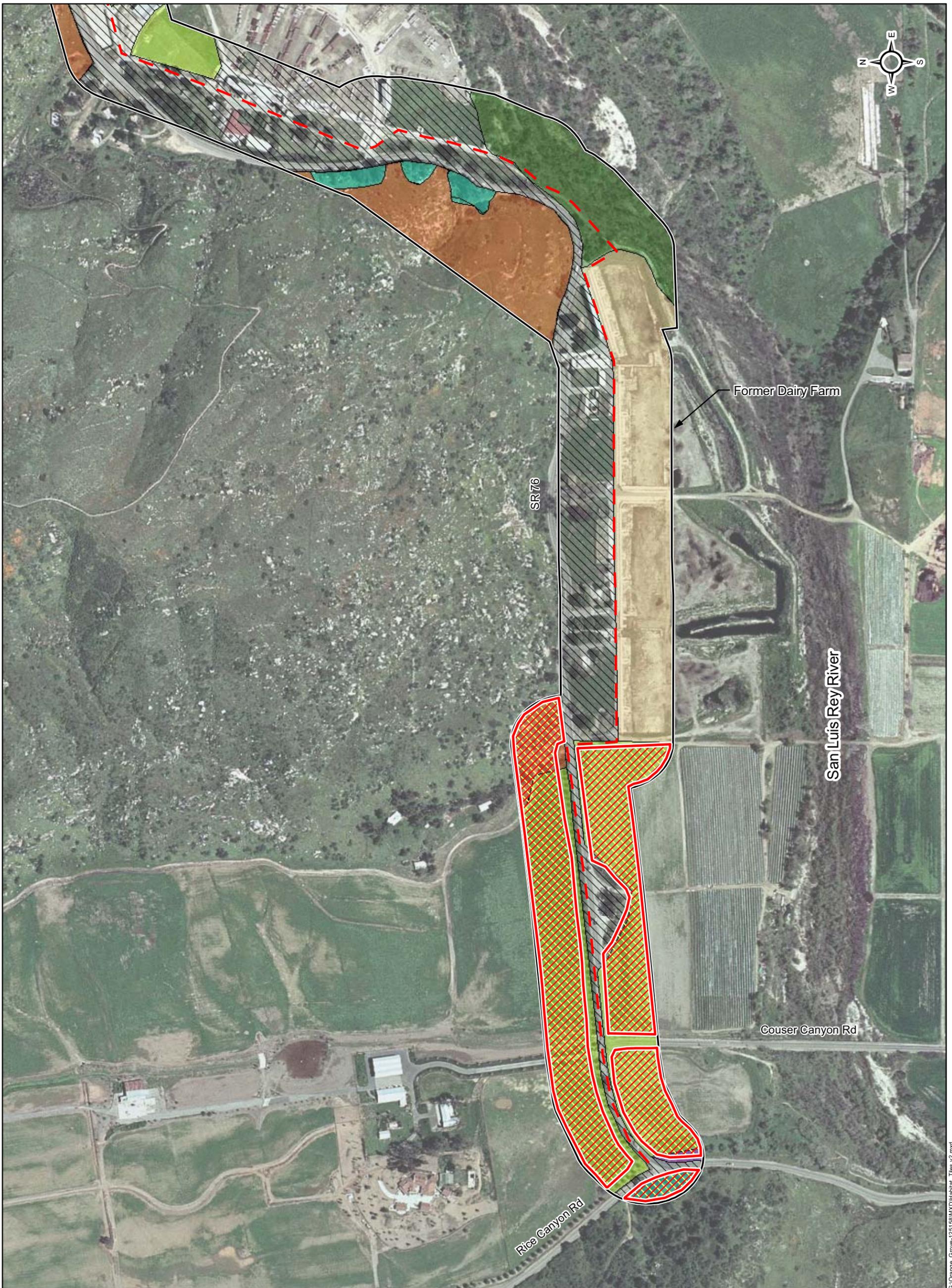


Figure 6.6-5 C
 Site Biological Resources
 Orange Grove Project



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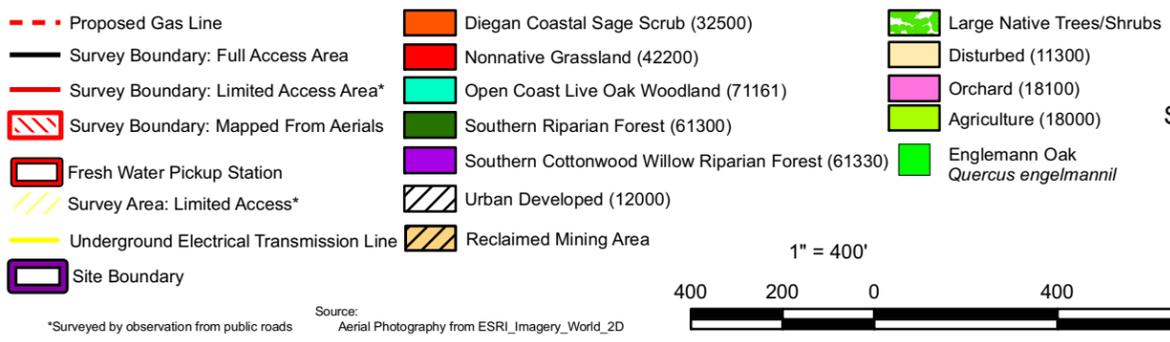
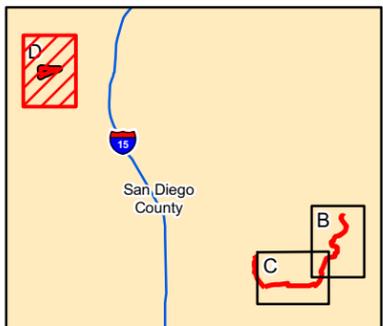
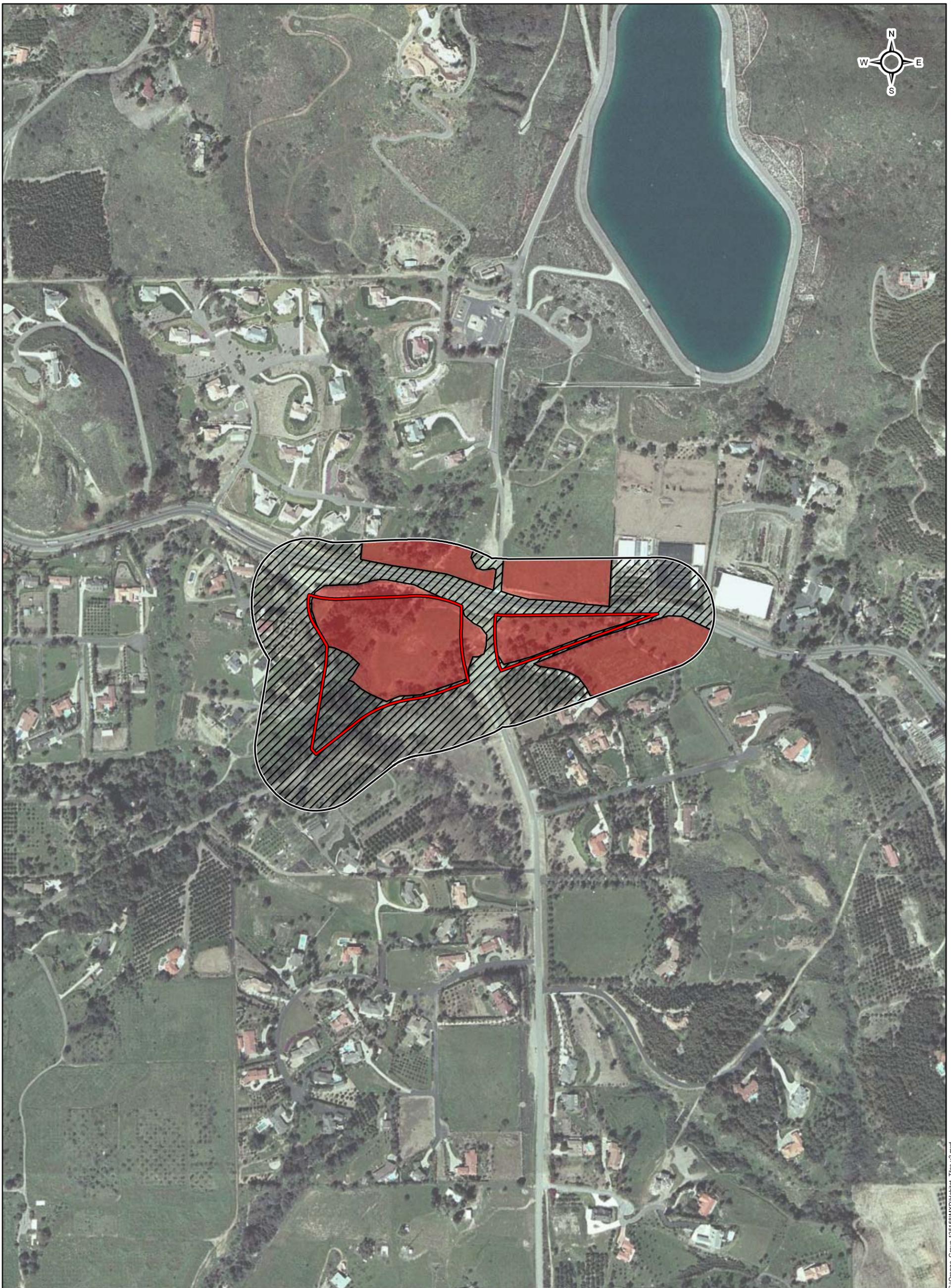


Figure 6.6-5 D
 Site Biological Resources
 Orange Grove Project



*Surveyed by observation from public roads Source: Aerial Photography from ESRI_Imagery_World_2D

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