8.2 Biological Resources

This section describes biological resources near the SVEP, and the potential effects of the project on them. Section 8.2.1 discusses the affected environment, including a regional overview of biological resources, vegetation, sensitive plant communities, wetlands, wildlife, economically important wildlife species, special environmental areas, and special-status species. Section 8.2.1 also discusses methods and results of biological field surveys at the SVEP, and along each of the linear facilities. Section 8.2.2 discusses the effects that construction and subsequent operation of the new facilities may have on special-status plant and animal species and sensitive habitats. Section 8.2.3 evaluates any potential cumulative impacts to biological resources in the project vicinity, and Section 8.2.4 addresses proposed mitigation measures that would avoid, minimize, or compensate for adverse impacts. Section 8.2.5 presents applicable LORS. Section 8.2.6 presents agency contacts and Section 8.2.7 presents permit requirements and schedules. Section 8.2.8 contains references.

8.2.1 Affected Environment

The following Sections describe the biological setting for the SVEP, beginning with a regional overview followed by a description of the habitat types present in the area; a discussion special-status species that are known or have potential to occur in the project vicinity and a description of the biological surveys.

8.2.1.1 Regional Overview

The project site is located in the Perris Valley and Hills subsection of the Southern California Mountains and Valleys Ecological sub-region, which includes the area between the San Jacinto Fault to the northeast and the Elsinore Fault zone to the southwest (Miles and Goudey, 1997). The Santa Ana Mountains, located approximately 20 miles from the project site, make up the western boundary of the subregion, and the foothills of San Jacinto Mountains, approximately 15 miles east of the project site, mark the eastern boundary.

The region is characterized by a hot semi-arid climate that is modified to some degree by marine influences. Average annual rainfall in the San Jacinto Valley recorded at the University of California at Riverside Citrus Experiment Station (NCDC #7473) is approximately 11 inches with most of the rainfall (85 percent) occurring between November and March.

Natural habitats in the general area were historically characterized by California sagebrush, California buckwheat, and needlegrass grasslands (Miles and Goudey, 1997). In 1882, the California Southern Railroad extended into the region, resulting in an influx of settlers who established homes and farms throughout the area. Today, the majority of the region is characterized by a mixture of urban, industrial, and agricultural uses. Principal crops grown in this area include wheat, alfalfa, safflower, potatoes, melons, and sugar beets. Currently, much of the land use throughout is in transition from agriculture to urban and industrial development. Much of the remaining natural habitat (California sagebrush and buckwheat) occurs in small fragments or on the rocky hill slopes scattered throughout the valley where farming is not practicable.

Significant regional biological resources in the project vicinity include core habitat areas for a variety of rare and endangered species such as the Stephens' kangaroo rat and the Quino checkerspot butterfly. In addition, several areas designated as "Criteria Cells" in the western Riverside County Multi-Species Habitat Conservation Plan (MSHCP) occur throughout the region. Criteria cells are designated areas (1/4 section in size) that have been assigned a set of specific conservation goals and objectives as part of the regional habitat conservation plan. Significant regional natural resources within a 20-mile radius of the project area are shown in Figure 8.2-1. Important regional natural areas include:

- The California Department of Fish and Wildlife's San Jacinto Wildlife Area and the California Department of Parks and Recreation Lake Perris State Recreation Area, both of which are located approximately 7 miles north of the project site
- The Metropolitan Water District's (MWD) Lake Mathews Ecological Preserve, approximately 16 miles northeast of the project site
- The Nature Conservancy's March Air Force Base SKR Management Area, located approximately 12 miles northwest of the project site
- MWD and Riverside County Regional Park and Open Space District's Lake Skinner ecological reserves, located approximately 10 miles southeast of the project site
- The Bureau of Land Management's Potrero Area of Critical Environmental Concern, located approximately 15 mile northeast of the project site
- City of Riverside Park and Recreation Department's Sycamore Canyon Park, located approximately 18 miles northwest of the project site
- University of California at Riverside, Motte Rimrock Reserve, located approximately 9 miles to the northwest from the project site
- U.S. Forest Service's San Mateo Canyon Wilderness Area, located approximately 18 miles southeast of the project site

8.2.1.2 Project Site

The proposed project site includes approximately 20 acres of agricultural land that is currently cultivated in wheat, but the area has been zoned for light industrial land use. Figure 8.2-2 shows the project area and habitats within one mile of the project site and 1,000 feet of the linear appurtenances. The Burlington Northern Santa Fe (BNSF) railroad tracks are located immediately north of the site and wheat fields are present immediately to the west, south and east of the site. A fenced equipment storage yard is located immediately to the northeast and a residential home is located to the southeast. No natural habitats, trees or wetland areas were evident at the proposed project site.

Land use surrounding the project site includes a mixture of agricultural fields, fallow-ruderal areas, residential developments, and industrial areas. The Southern California Edison Valley Substation and a wood recycling facility are located north of the project, and the Inland Empire Energy Center is located approximately 0.7 mile to the northwest. Agricultural and fallow-ruderal habitats are common to the west and southwest of the project area along with some areas supporting natural coastal scrub habitat present on

San Jacinto Wildlife Area

Perris Reservoir

Lake Matthews

Project Site

San Bernardino National Forest

Lee Lake

Cleveland National Forest

Railroad Canyon Res.

Lake Elsinore

Lake Skinner

Vail Res

RIVERSIDE

74 79 243 215 15

Legend

- Project Location
- Parks and Recreation
- CA Fish and Game
- Bureau of Indian Affairs
- Bureau of Land Management
- U.S. Forest Service
- Stephens' Kangaroo Rat Habitat

N

0 3 Miles

SCALE 1:190,080

FIGURE 8.2-1
REGIONAL BIOLOGICAL RESOURCES
SUN VALLEY ENERGY PROJECT
ROMOLAND, CALIFORNIA

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burrowing owl

Stephens' kangaroo rat

Western yellow bat

northern red-diamond rattlesnake

southern grasshopper mouse

Western yellow bat

coastal California gnatcatcher

Stephens' kangaroo rat

Stephens' kangaroo rat

Los Angeles pocket mouse

Dulzura pocket mouse

Stephens' kangaroo rat

golden eagle

Stephens' kangaroo rat

Stephens' kangaroo rat

Stephens' kangaroo rat

orange-throated whiptail

coastal California gnatcatcher

Stephens' kangaroo rat

Stephens' kangaroo rat

LEGEND

- Proposed Gasline
- Proposed Transmission Line
- Proposed Non-Reclaimable Wastewater Line
- Project Location
- 2 Mile Buffer

CNDDB Data

- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)

N

0 2,500 Feet

SCALE 1:30,000

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FIGURE 8.2-2
SPECIAL-STATUS SPECIES RECORDED IN PROJECT AREA
SUN VALLEY ENERGY PROJECT
ROMOLAND, CALIFORNIA

CH2MHILL

the low, rocky hills. The area to the southeast of the project site, on the east side of Menifee Road and south of the railroad tracks is currently being developed for housing. Areas to the northeast are predominantly agricultural fields. Descriptions of habitat types, wildlife and special-status species in the project vicinity are provided in the following sections.

8.2.1.3 Habitat and Vegetation Communities

Predominant habitat types in the area include agricultural lands and developed areas. Many of the former agricultural areas are being converted into residential, commercial and industrial developments. Nomenclature for habitat types follows the *Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988) with supporting information from *A Manual of California Vegetation* (Sawyer and Keeler-Wolf, 1995), and *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland, 1986). General descriptions of the habitats observed in the project vicinity are provided below.

8.2.1.3.1 Coastal Scrub

Coastal scrub habitat is characterized by low to moderate-sized woody and semi-woody shrubs with shallow root systems. This habitat is found in discontinuous narrow band along the western side of the state, from Del Norte County south to San Diego County. In the southern part of the state, the habitat extends inland into western Riverside County. Elevations range from sea level up to 3,000 feet. Structure and composition of the community are variable depending on moisture, aspect, and amount of coastal influence, among other factors. Coastal Scrub habitat in the project vicinity includes the California buckwheat series and the California sagebrush series (Sawyer and Keeler-Wolf, 1995), and the Riversidean Sage Scrub (Holland, 1986), which represent the most xeric of the coastal scrub variations. This habitat typically occurs on well-drained steep slopes with shallow clay soils. In southern California, characteristic plant species in this community include California buckwheat (*Eriogonium faciculatum*), California sagebrush (*Artemesia californica*), black sagebrush (*Salvia mellifera)*, brittlebush (*Encelia farinose*), golden yarrow (*Eriophyllum confertiflorum*), California rush rose (*Helianthemum scoparium*), chia (*Salvia columbariae*), and bush mallow (*Malacothamnus fasciculatus*). Non-native species such as red brome (*Bromus madritensis* ssp. *rubens*) and black mustard (*Brassica nigra*) are locally common in some parts of this habitat. Remnants of the coastal scrub habitat in the project vicinity are restricted to the dry rocky slopes in the southwestern part of the study area.

8.2.1.3.2 Cropland

Agriculture has historically been the primary land use in the project vicinity. At the time of the reconnaissance survey most agricultural areas in the immediate project vicinity were planted in wheat, but other common crops grown in the region include alfalfa, safflower, potatoes, melons, and sugar beets. A small orange grove is present to the southeast of the proposed project site, but no other orchards were observed in the immediate area. Croplands are typically located on flat to gently rolling hills with the type of crop often dependent on climate, soil type and irrigation availability. Croplands are intensively managed and with the exception of ruderal species present along field edges and scattered among the crops these area lack natural vegetation.

8.2.1.3.3 Ruderal/Fallow Areas

Ruderal/fallow areas have not been assigned a habitat category, but most closely resemble the Annual Grassland habitat types described in the literature (termed Annual Grassland by

Mayer and Laudenslayer, 1988; California annual grassland series by Sawyer and Keeler-Wolf, 1995; and Non-Native Grassland by Holland, 1988). Characteristic vegetation in this habitat includes invasive species that are often associated with disturbance such as Russian thistle (*Salsola tragus*), black mustard (*Brassica nigra*), prickly lettuce (*Lactuca serriola*), western sunflower (*Helianthus annuus*), horseweed (*Conyza* sp.), doveweed (*Croton setigerus*), red brome (*Bromus madritensis*), wild oat (*Avena barbata*), sour clover (*Melilotus indicus*), and ragweed (*Ambrosia* sp.). Some areas within the ruderal habitat also support non-native *Eucalyptus* trees. The ruderal/fallow areas are typically found adjacent to the BNSF railroad track, within the transmission line right-of-way, along the edges of dirt roads and fields, in open lots, and in fallow agricultural fields.

8.2.1.3.4 Urban

Urban habitats include developed lands that support industrial, commercial, and residential areas, as well as areas that are currently being developed (areas that have been graded but no structures have been erected). Vegetation associated with these areas typically includes lawns, horticultural plants and landscape trees and shrubs.

There are no large reservoirs, lakes, wetlands, rivers or perennial streams in the project vicinity that would support fisheries or waterfowl species. Urban development and agricultural conversion throughout the region has resulted in fragmentation of natural vegetation, and there are no expanses of habitat in the immediate project vicinity capable of supporting large game animals.

8.2.1.4 Special-Status Species

Special-status species include all those plants and animals that have been listed as threatened or endangered under the Federal or California State Endangered Species Acts (ESAs) as well as any species that is recognized as rare, threatened or endangered that has not yet been formally listed. Examples of special-status species included any plant or animal that is a candidate for state or federal listing; federal and state species of concern; California fully protected and rare species; and plants considered to be rare, threatened or endangered by the California Native Plant Society (CNPS). Descriptions of special-status plants and wildlife species are provided in the following Sections. Figure 8.2-3 shows the results of a California Natural Diversity Database sensitive species search for all areas within 2 miles of the project site. Table 8.2-1 (at the end of this section) lists special-status species have been reported or are suspected to occur in the general project vicinity. A comprehensive list of special-status species from the California Natural Diversity Database and from the U.S. Fish and Wildlife Service is included in Appendix 8.2A.

8.2.1.4.1 Special-Status Plants

Special-status plants include federal- and state-listed threatened or endangered species, state-listed "rare" species, all taxa listed in CNPS' Inventory of Rare and Endangered Plants (CNPS, 2005), and any additional narrow endemic plant species potentially occurring in the project area that are included in the Western Riverside County MSHCP (Riverside County Integrated Project [RCIP], 2003). A list of special-status species evaluated for the project was compiled from a search of the California Natural Diversity Database (California Department of Fish and Game [CDFG], 2005), the CNPS electronic inventory (2005), information provided by the U.S. Fish and Wildlife Service (Medak, 2005), and species range maps provided in the Western Riverside MSHCP (RCIP, 2003). A total of 25 special-status plant species have been reported or are suspected to occur in the general project vicinity.

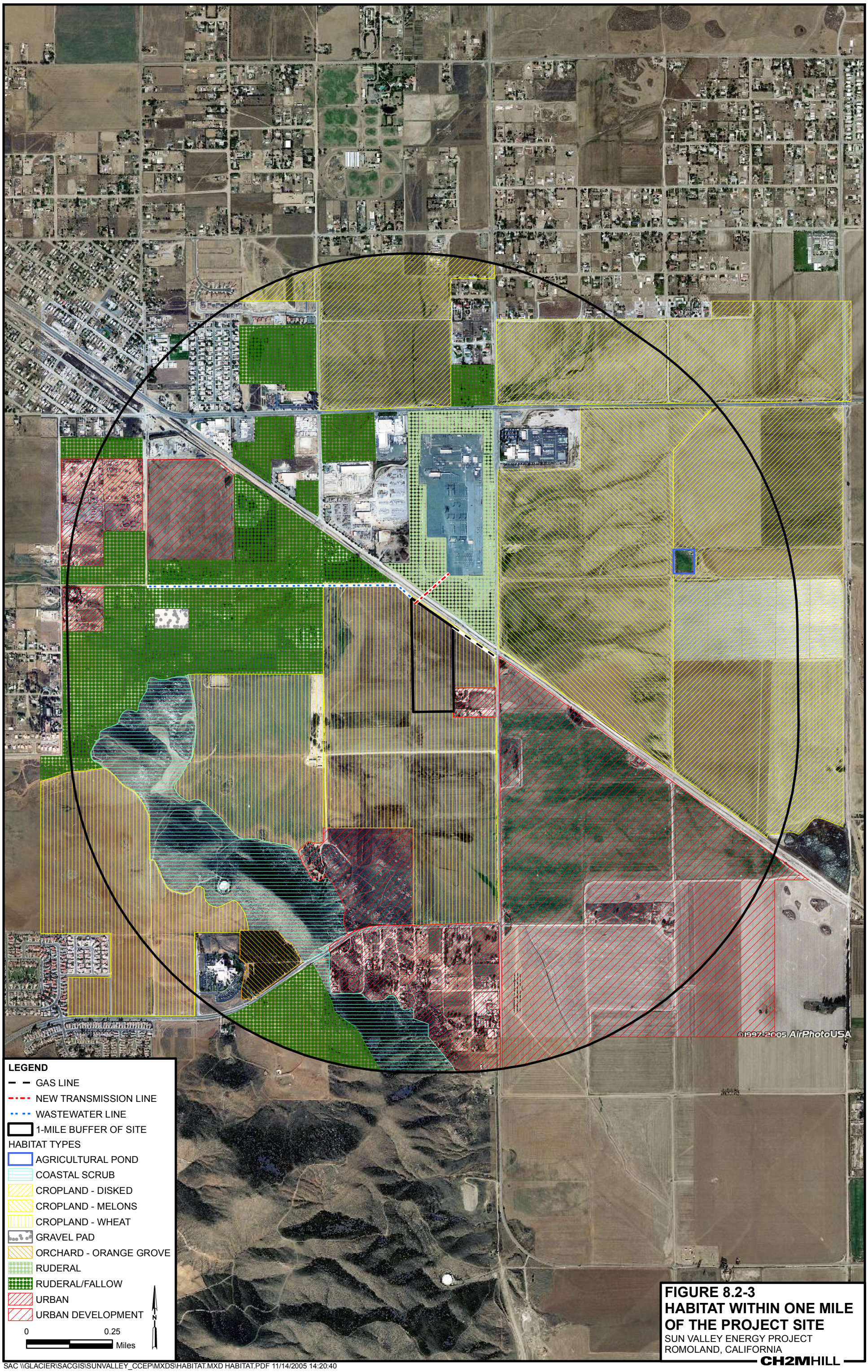

FIGURE 8.2-3
HABITAT WITHIN ONE MILE OF THE PROJECT SITE
SUN VALLEY ENERGY PROJECT
ROMOLAND, CALIFORNIA

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Eleven special-status plant species are reported to occur within 5 miles of the project area, but no rare plants have been reported within 2 miles of the site. The majority of the special-status plant species identified in the area are associated with coastal scrub, chaparral, grasslands, playas and vernal pool habitats which are not found in the immediate analysis area. With the exception of smooth tarplant (*Centromadia pungens* ssp. *laevis*), which is tolerant of agricultural and rural disturbance, most of the special-status plants are considered unlikely to occur in the project area.

8.2.1.4.2 Special-Status Wildlife

Special-status wildlife includes all federal- and state-threatened or endangered species, as well as any federal or state species of concern, California "fully protected" species, and any wildlife species specifically covered under the Western Riverside County MSHCP. A target list of 57 special-status wildlife species potentially affected by the project were identified as potentially occurring in the general project area based on CNDDB records, information provided by the U.S. Fish and Wildlife Service (USFWS), and wildlife range maps from the MSHCP and the Stephens' Kangaroo Rat Habitat Conservation Plan (HCP) (Riverside County Habitat Conservation Agency [RCHCA], 1990). Wildlife species potentially found in the area are listed in Table 8.2-1. Ten special-status wildlife species are known to occur within 5 miles of the project area (Figure 8.2-3). Six species, including the Stephens' kangaroo rat (*Dipodomys stephensi*), Dulzura pocket mouse (*Chaetodipus californicus femoralis*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), the southern grasshopper mouse (*Onychornys torridus ramona*), and the coastal California gnatcatcher (*Polioptila californica californica*) have been reported within a mile from the project area (Figure 8.2-3). The majority of the wildlife species identified in Table 8.2-1 are associated with habitat elements that are absent from the project area; however, the agricultural fields may provide suitable foraging habitat for both resident and migratory species. Wildlife species considered to potentially occur in the project area are discussed in the following sections.

Vernal Pool Crustaceans

The nearest known occurrence of vernal pool fairy shrimp (*Branchinecta lynchi*) is approximately 6 miles east of the project site near Hemet (CH2M HILL, 2005). This species inhabits a variety of seasonal wetland habitats, from small, clear, sandstone rock pools to large, turbid, alkaline, vernal pools, but it is most often found in small grass or mud bottom vernal pools and swales in unplowed grasslands (USFWS, 1994). Dormant cysts hatch soon after the pools fill with water and temperatures are around 50°F or slightly less. Under optimal conditions (water temperatures around 68°F) this species can reach sexual maturity within 18 days; however, 41 days is more typical in cooler water (Erickson and Belk, 1999). Suitable ponds must therefore remain inundated for a minimum of two and a half weeks to be considered viable habitat for this species.

There are no known occurrences of Riverside Fairy Shrimp (*Streptocephalus woottoni*) in the immediate project area. This species requires deep, cool pools that remain inundated for a minimum of 60 days in order for this species to complete its life cycle (Erickson and Belk, 1999).

During the site reconnaissance surveys, no evidence of seasonal ponds or vernal pools was observed on the project site. One seasonally ponded area (MW-051) was identified approximately 100 feet north of the proposed wastewater pipeline during surveys for the Inland Empire Energy Center (see Figure 8.2-2). The status of pool MW-51 as well as other potential seasonal pools in the immediate project area will be determined during surveys conducted during the winter of 2005 -2006 following a significant rainfall event.

Quino Checkerspot Butterfly

The Quino checkerspot butterfly (*Euphydryas editha quino*) is a medium-sized butterfly with a wingspan of approximately one inch. The wings are a patchwork of brown, red and yellow spots. Suitable habitat for this species requires a combination of abundance of the host plant species and topography. Larvae feed primarily on California plantain (*Plantago erecta*), which is a widespread species in western Riverside County. Adults feed on nectar from a variety of herbaceous species, but are typically found on rounded ridge tops with sparse shrub cover. Most populations are associated with loamy soils that contain a moderate to high amount of clay, sparse shrub cover, and a high density of native plant species that provide food for both larval and adult life stages. The nearest known occurrence of the Quino checkerspot butterfly is approximately 3 miles to the southwest of the project site. Because of the site conditions and the lack of host plant species, this species is unlikely to present on the SVEP site.

Reptiles and Amphibians

With the exception of the western spadefoot toad (*Spea hammondii*) all of the special-status reptiles and amphibians known to occur in the region are associated with habitat elements such as coastal scrub, chaparral, riparian areas, rock outcrops or wetlands and aquatic resources that are not present in the proposed project area or along the associated linear corridors. The western spadefoot may use terrestrial habitats such as edges of croplands and ruderal areas; however, seasonal pools with water temperatures between 48°F and 86°F that remain inundated for a minimum of 21 days are required for breeding and successful metamorphosis (Feaver, 1971). Pools meeting these requirements are not present on the SVEP site. The nearest known occurrence of this species is approximately 4.5 miles south of the project site on the west side of Interstate 215.

Birds

Croplands and ruderal/fallow fields adjacent to the project area and along the wastewater, natural gas, and transmission line corridors provide suitable foraging habitat for a number of resident and migratory special-status bird species such as the tricolor blackbird (*Agelaius tricolor*), ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), turkey vulture (*Cathartes aura meridionalis*), white-tailed kite (*Elanus leucurus majusculus*), California horned lark (*Eremophila alpestris actia*), prairie falcon (*Falco mexicanus*), merlin (*Falco columbarius*), and loggerheaded shrike (*Lanius ludovicianus gambeli*). There are no reported nest locations for these species within a mile of the project area; however, transmission towers, telephone poles, and eucalyptus trees within a half mile of the project area may provide nesting habitat for raptors such as the red tail hawk (*Buteo jamaicensis*) and the Cooper's hawk (*Accipiter cooperii*).

Burrowing owls (*Speotyto* [*Athene*] *cunicularia hypugea*) are found in grasslands, deserts and scrublands with low growing vegetation. They are ground-nesting owls that primarily use burrows made by fossorial mammals, such as ground squirrels, but will also use man-made structures, such as cement culverts; debris piles, or openings beneath cement or asphalt pavement for this purpose (California Burrowing Owl Consortium [CBOC], 1993). One burrowing owl location has been reported within 2 miles of the project site (Figure 8.2-3). Potential burrowing owl habitat in the project vicinity includes ruderal fields, roadsides, and crop margins, and surveys for this species are required under the Western Riverside County MSHCP.

The California coastal gnatcatcher occurs on rocky hillsides with coastal scrub habitats throughout the region. This species may also use chaparral, grassland, and riparian areas where they occur adjacent to sage scrub habitats (Bontrager, 1991). They are primarily insectivorous and habitat use appears to be strongly associated with the abundance of prey items such as beetles, flies, spiders and larval stages of all arthropods (Redak et al., 1997). This nearest suitable habitat and known occurrence of this species is approximately 0.75 mile southwest of the project site (Figure 8.2-3). No coastal scrub habitat is present within a half mile of the project site.

Mammals

Suitable habitats such as coastal scrub, chaparral, woodland, riparian and grassland which support most of the special-status mammals that may occur in the region are absent from the immediate project area and associated linear corridors. However, the project site is located within the historic range of the endangered Stephens' kangaroo rat (*Dipodomys stephensi*). This species is typically associated with annual grassland, mixed annual grassland/coastal sage scrub, and sparse coastal sage scrub habitats, but may also occur in disturbed habitats where the native vegetation has not been completely removed, and in areas where suitable habitat conditions have been created by agricultural activities (O'Farrell, 1990; USFWS, 1997). The Stephens' kangaroo rat is a small nocturnal burrowing rodent that is very similar in size and appearance to the Pacific kangaroo rat, which lives in the same general area, but is not a federal- or state-listed species. Activity outside of the burrows is limited to foraging activities, such as collecting seeds, fresh vegetation, and insects. Most foraging occurs in open areas within approximately 100 feet of the burrow (Price et al., 1994). Known occupied habitat within western Riverside County is concentrated in the core reserve areas shown in Figure 8.2-1. The nearest core conservation area to the project site is the University of California's Motte Rimrock Reserve, located approximately 9 miles to the northwest of the project site.

In addition, three California species of concern have also been reported from within one mile of the proposed project site (Figure 8.2-3). The Dulzura pocket mouse (*Chaetodipus californicus femoralis*) prefers coastal scrub and grassland habitats but may utilize more disturbed ruderal areas. This species has been observed in the ruderal habitats along the BNSF right-of-way approximately 1 mile southeast of the proposed project site. The Dulzura pocket mouse is nocturnal, with above-ground activity limited to foraging and reproduction. During the day, they remain in their burrow systems, the entrances of which are plugged with earth to keep the temperature low and humidity high. Above-ground forays involving movements of adult individuals of up to 2,800 feet in a 24-hour period have been recorded in trapping studies (Nowak, 1999; Zeiner et al., 1990).

The Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) is found in low-elevation grassland and coastal sage scrub habitats with fine sandy soils (Patten et al., 1992). Pocket mice are primarily nocturnal, with an initial bout of surface activity within two to four hours after sunset and then declining activity throughout the night when they forage primarily for grass seeds (O'Farrell, 1974). The range of movement from their underground burrows varies between 12 and 285 feet (Spencer and Schaefer, 2000). There is one reported burrow site reported within a mile of the project site near the intersection of Briggs and Mathews roads. Habitat in this area was described as ruderal, characterized by non-native grasses and various herbaceous species, with farmland to the south (CDFG, 2005).

The southern California grasshopper mouse (*Onychornys torridus ramona*) is found in desert habitats with low to moderate shrub cover where it feeds almost exclusively on Arthropods (Horner et al. 1964). The only reported occurrence of this species in the project vicinity is from a 1932 collection at "Menifee." There are no recent records of this species in the project area (CDFG, 2005.)

Presence of special-status mammals such as the Stephens' kangaroo rat, Dulzura pocket mouse, and the Los Angeles pocket mouse will be assumed in the project area and potential impacts to this species will be compensated through payment of habitat conservation fees established by the Habitat Conservation Plan (RCHCA, 1990).

8.2.1.5 Biological Surveys

Biological resources evaluated for project-related impacts include vegetation communities, wetlands, wildlife, and special–status species in temporary and permanent project impact locations. Reconnaissance-level surveys and habitat characterization for the proposed project site, the natural gas supply pipeline, water supply pipeline, and transmission line corridors were conducted by CH2M HILL biologists on September 8, 2005. Surveyor's qualifications are provided in Appendix 8.2B.

Biological surveys of the proposed project site were conducted by CH2M HILL biologists Marjorie Eisert (wildlife) and Russell Huddleston (botany) on September 8, 2005. Surveys included a reconnaissance level evaluation of the proposed project site and the associated linear features. Surveys were conducted by a combination of driving access roads and linear routes and pedestrian surveys of the site and specific areas along the linear features. Habitats within a mile radius of the project site were characterized and mapped. Wildlife observations and dominant plant species in the area were noted (Table 8.2-2). The project area and linear construction corridors were examined for evidence of seasonal ponding, intermittent creeks and other aquatic resources during the surveys.

TABLE 8.2-2
Wildlife and Plant Species Observed in the Project Vicinity During the September 8, 2005 Survey

Wildlife	
Birds	
American crow	*Corvus brachyrhynchos*
American kestrel	*Falco sparverius*
Brewer's blackbird	*Euphagus cyanocephalus*
Common raven	*Corvus corax*
European starling	*Sturnus vulgaris*
Loggerhead shrike	*Lanius ludovicianus*
Red-tailed hawk	*Buteo jamaicensis*
Rock dove	*Columba livia*
Song sparrow	*Melospiza melodia*

TABLE 8.2-2
Wildlife and Plant Species Observed in the Project Vicinity During the September 8, 2005 Survey

Mammals	
California ground squirrel	*Spermophilus beecheyi*
Plants	
Black mustard	*Brassica nigra*
Cereal wheat	*Triticum aestivum*
Common knotweed	*Polygonum arenastrum*
Eucalyptus	*Eucalyptus* sp.
Horseweed	*Conyza canadensis*
Prickly lettuce	*Lactuca serriola*
Ragweed	*Ambrosia sp.*
Red Brome	*Bromus madritensis ssp. rubens*
Ripgut brome	*Bromus diandrus*
Russian thistle	*Salsola tragus*
Sourclover	*Melilotus indica*
Turkey mullein	*Eremocarpus setigerus*
Western sunflower	*Helianthus annuus*
Yellow star-thistle	*Centaurea solstitialis*

Wildlife species observed in the project area during the September 8, 2005 reconnaissance survey includes a variety of birds species that are adapted to urban and agricultural habitats, such as European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), song sparrow (*Melospiza melodia*), rock dove (*Columba livia*), Brewer's blackbird (*Euphagus cyanocephalus*), loggerhead shrike (*Lanius ludovicianus*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*). The only mammal species observed was the California ground squirrel (*Spermophilus beecheyi*).

8.2.1.6 Seasonal Surveys

Additional surveys will be conducted at the appropriate time of year when rare plants, special-status wildlife species and seasonally ponded areas are most likely to be detected, if present, in the project vicinity. The following Sections briefly describe the biological surveys that will be completed in season, in the upcoming months, to further evaluate biological resources.

8.2.1.6.1 Spring Botanical Surveys

Botanical surveys of the project site, access roads, transmission line, wastewater pipeline, and natural gas pipeline corridor will be conducted during the spring of 2006 in order to fully characterized the flora of the area and determine if any special-status plant species are present. Surveys will follow CDFG (2000) and USFWS (1996) protocols and will be conducted

by qualified botanist familiar with the local flora and identification of special-status species. The surveys will be conducted during the appropriate blooming period when special-status plant species are most likely to be observed if present. To the extent possible, reference populations will be examined to determine the phenological status of rare plants potentially occurring in the area prior to the surveys. Surveys will be floristic in nature, such that all plant species will be identified to a taxonomic level sufficient to determine their conservation status. All rare plant occurrences in the survey area will be documented and mapped.

A rare plant report will be submitted upon completion of the surveys. The report will contain the dates of the surveys, the names and qualifications of the surveyors, methods (including any reference areas examined prior to the survey), a description of habitat types in the survey area, a complete list of plant species observed, maps, and survey forms for any rare plant occurrences identified during the surveys.

8.2.1.6.2 Wet Season Aquatic Resources Surveys

Surveys for aquatic resources including vernal pools, swales, seasonal wetlands and other topographic depressions that may be inundated for a minimum of 14 consecutive days will be conducted by a qualified biologist during the winter and early spring of 2005-2006 after a period of sufficient precipitation to allow for such areas to fill with water. Surveys will focus on the nonreclaimable wastewater and natural gas pipeline corridors within a 250-foot-wide buffer from the work areas. Aquatic habitats will be mapped and evaluated for potential habitat based for vernal pool crustaceans and amphibians. Protocol surveys will not be conducted, but any aquatic habitat that meets the minimum habitat requirements for special-status vernal pool crustaceans and/or the western spadefoot toad will be considered occupied habitat.

Any other potential jurisdictional waters or wetlands will also be evaluated and mapped during these surveys. The extent of jurisdictional Waters of the United States will be determined based on the ordinary high water mark, and potential wetland areas will be evaluated based on the presence of hydrophytic vegetation, wetland hydrology, and hydric soils, in accordance with the 1987 Wetlands Delineation Manual (Environmental Laboratory, 1987).

Upon completion of the aquatic resources surveys, a technical report will be prepared. The report will contain the name(s) and qualifications of the survey staff, dates, a general overview of the hydrologic conditions of the area, weather conditions and rainfall patterns prior to the survey, maps and descriptions of each of the aquatic resources identified including size, vegetation, wildlife observed, water depth, hydrologic regime, and water quality data. In the event that jurisdictional waters (including wetlands) are identified in the project study area, a wetland delineation report will be prepared and submitted to the U.S. Army Corps of Engineers for verification. In the event that it will be necessary for the nonreclaimable wastewater pipeline to cross waters of the state, project staff will apply for a Streambed Alteration Agreement with the CDFG.

8.2.1.6.3 Winter Bird Surveys

Surveys for special-status bird species will include a minimum on one winter survey conducted between December 1 and January 31 to determine the presence of special-status winter migrants and non-breeding birds in the project area. Surveys will include the entire project area and a 500-foot buffer around all work areas. Visual surveys will be conducted

by walking the project area as well as using binoculars and a spotting scope. Surveys will be conducted by a qualified wildlife biologist and will only be done under suitable weather conditions.

The project is located in a designated habitat assessment area for the burrowing owl under the Western Riverside County MSHCP. Burrowing owl surveys will be conducted by qualified biologist approved by the Riverside County Environmental Programs Department and follow protocols established by the California Burrowing Owl Consortium (April 1993). Nest surveys will include four site visits on different days spread out through the peak breeding season (April 15 through July 15). Nest surveys will include pedestrian transects (no more than 100 feet apart) of the project area and a 500-foot buffer around work areas conducted at either dawn or dusk. Any nest locations or active burrows will be recorded and mapped. In addition to the burrowing owl survey, potential nest sites such as large trees, utility poles, and transmission towers in the project vicinity will be examined for nesting activity during each of the four site visits.

Upon completion of the bird surveys a technical report will be prepared and submitted. The report will contain the dates and times of each of the surveys, the name(s) and qualifications of the survey personnel, weather and visibility conditions, description of the methods, site conditions, an assessment of habitat suitability, comprehensive list of all animals observed, survey forms, and maps of any nest or active burrow locations observed in the study area

8.2.1.6.4 Stephens' Kangaroo Rat and Special Status Mammals

The entire project area lies within the Stephens' kangaroo rat HCP fee area. Mitigation fees based in the total acreage of project impacts will be provided to compensate for potential impacts to this species. Protocol level surveys will not be conducted for Stephens' kangaroo rat or other special–status mammals. General wildlife surveys will be conducted concurrently with the other natural resource surveys in the area.

8.2.2 Environmental Consequences

Potential direct and indirect impacts to biological resources were evaluated to determine the permanent and temporary effects of project construction, operation, maintenance, and decommissioning of the SVEP and supporting facilities. The following Sections describe the significance criteria, the potential impacts associated with each phase of the project and a discussion of overall project impacts on special-status species and habitats.

8.2.2.1 Significance Criteria

Impacts to biological resources are considered significant if one or more of the following conditions could result from implementation of the proposed project:

- Substantial effect, reduction in numbers, range restriction or loss of habitat for a population of a state or federally listed threatened or endangered species
- Substantial effect, reduction in numbers, range restriction or loss of habitat for a population of a non-listed special-status species such as a federal or state candidate or proposed species, species of concern, fully protected species, state listed rare species, and California Native Plant Society listed 1B and 2 plants

- Substantial interference with movement of any resident or migratory fish or wildlife species
- Substantial reduction of habitat for native fish, wildlife or plants
- Substantial disturbance of wetlands, riparian woodlands, and other sensitive habitats
- Removal of trees designated as heritage or significant under County or local ordinances

8.2.2.2 Construction Phase Impacts

8.2.2.2.1 Project Facilities

Construction of the SVEP, including the facility site would permanently remove up to 20 acres of agricultural land, currently farmed in wheat. Approximately 3 acres required for lay down and staging areas during project construction would be located within the facility site footprint. The agricultural field provides marginal habitat for wildlife species, including small mammals and foraging birds. Access to the site would be along existing, paved and unpaved roads. Some of these areas would likely be paved as part of the project to reduce dust from construction equipment. The parcel is zoned for industrial development and is planned for developed with or without the project.

Water supply pipelines, including the 12-inch-diameter reclaimed cooling water line, 10-inch-diameter fire water line, and 4-inch-diameter potable water supply would tie into existing utility pipelines immediately north of the project site.

The proposed 12-inch-diameter natural gas pipeline will run approximately 750 feet from the facility site to the southeast along northern property boundary to SoCalGas high-pressure pipelines at Menifee Road. The primary method of construction is excavation of a 4-foot-deep and 3- to 7-foot-wide open trench, with a construction corridor of 50 to 75 feet that will be used to store excavated soils, pipeline materials and construction equipment. Construction of the pipeline would be within the existing dirt road. Minimal clearing of ruderal roadside vegetation may be required in some areas, but no natural habitat, trees or wetland areas would be affected by the pipeline construction, although ruderal areas may provide habitat for some mammals, as stated earlier.

The nonreclaimable wastewater pipeline would run approximately 0.75-mile west of the project site where it would tie-into the Inland Empire Energy Center brine line at McLaughlin Road and Antelope Road. Construction methods of the wastewater pipeline would be similar to those for the natural gas pipeline described above.

A 115-kV transmission line would run approximately 600 feet to the existing Southern California Edison Valley substation. Construction of the transmission line would require a single steel lattice or monopole tower that would be located within the existing SCE right-of-way.

8.2.2.2.2 Potential Impacts to Special-Status Species and Sensitive Habitats

The proposed project site is characterized by agricultural lands, developed areas, and ruderal fields with natural habitat largely restricted to the rocky hill slopes located approximately 0.75 mile to the southwest of the project site. Focused surveys will be conducted in the spring of 2006 to determine if any rare, threatened or endangered species are present at the project site and associated linear facilities.

No evidence of vernal pools or other seasonal wetlands that could support special-status vernal pool crustaceans and amphibians were evident at the project site and only one area (seasonal pond MW-51) has been identified in the vicinity of the wastewater pipeline. Additional surveys for aquatic resources will be conducted during the winter and spring of 2005-2006 to further characterize and map aquatic habitats in the project area.

Minimal wildlife diversity was evident during the initial survey and the majority of the species that were observed are common and well-adapted to highly disturbed habitat conditions. Agricultural fields and surrounding ruderal habitats may provide suitable habit for burrowing owls. The burrowing owl nesting season is typically from February 1 through August 15. While no burrowing owls or potential nest sites were observed during the initial site surveys, protocol level surveys will be conducted and appropriate protection measures will be implemented in the event that an active nest is found.

The project is located within the historic range of the Stephens' kangaroo rat, but natural habitats in the area have been significantly disturbed and lost as a result of agricultural conversion and urban developments. The project site and ruderal/fallow areas in the vicinity could potentially support special-status small mammals such as the Stephens' Kangaroo rat, the southern grasshopper mouse, and the Los Angeles pocket mouse. Potential impacts to these species will be offset through conservation fees of $500 per acre that will be applied toward the acquisition and management of core habitat conservation areas throughout western Riverside County.

Because the project will not affect listed species, formal consultation with the USFWS to obtain an incidental take permit will not be necessary. Potential impacts to the habitat of species, such as the burrowing owl, that are covered under the Western Riverside County MSHCP are taken into consideration by conducting pre-construction surveys. Potential impacts in the Stephens' kangaroo rat habitat area are taken into consideration by participation in the Stephens' kangaroo rat HCP and payment of the per-acre Stephens' kangaroo rat habitat conservation fee. Informal consultation with the USFWS may be required regarding to document avoidance of seasonal pond MW-51 during construction of the non-reclaimable wastewater line. Seasonal pond MW-51 is located adjacent to McLaughlin Road and may contain vernal pool fairly shrimp. Construction of the non-reclaimable wastewater line in McLaughlin Road would avoid this feature.

8.2.2.3 Operational Phase Impacts

Operational impacts include potential environmental affects that may result from operation of the energy facility over the life of the project. Operational impacts include affects on the local water supply resources, cooling tower drift, noise and lighting, and potential for avian collisions and electrocution. Potential operational impacts are discussed in more detail in the following sections.

8.2.2.3.1 Cooling Water Source

The projects five cooling towers will utilize reclaimed water provided by the Eastern Municipal Water District. Since the project will be utilizing reclaimed water, no wildlife, fish or other aquatic organisms would be affected by cooling water procurement.

8.2.2.3.2 Cooling Tower Drift

A fine mist of water will be emitted into the atmosphere from the cooling towers. The cooling towers concentrate particles (total dissolved solids) during the cooling process resulting in a saline mist that can potentially damage vegetation resulting in reduced crop productivity, and could affect the health and vigor of trees, shrubs and herbaceous vegetation (including special-status plants) located in the deposition area. However, studies have found that deposition rates less than 274 grams per square meter per year ($g/m^2/yr$) did not result in stressed vegetation and salt stress in sensitive crop species (i.e., soybeans) was barely perceptible at deposition rates of 2.98 $g/m^2/yr$ (Lerman and Darley, 1975; Pawha and Shipley, 1979). The maximum expected deposition rate is 0.278 kilograms/hectare/year or 0.0278 $g/m^2/yr$, which is significantly below the level expected to cause adverse affects to crops and natural vegetation, therefore the effects of cooling tower drift would be less than significant.

8.2.2.3.3 Potential for Collision and Electrocution Hazard to Birds

Project facilities would include five 90-foot-tall stacks and a 600-foot-long 115-kV transmission line that could result in avian collisions. Most collisions involve nocturnal migrants or birds flying in low visibility conditions. Migratory birds typically fly at altitudes that avoid ground structures, except when crossing over topographic features or when inclement weather forces them closer to the ground. The project area is not located in a major migratory pathway and there are no significant topographic features in the immediate project vicinity. Because of the relatively low structure height and lack of guy wires, the potential for bird strikes is considered less than significant.

Large raptors, herons, and egrets can be electrocuted by transmission lines when a bird's wings simultaneously contact two conductors of different phases, or a conductor and a ground wire. The installation of transmission lines and poles will be conducted in accordance with the guidelines provided by the Avian Power Line Interaction Committee (1996). The transmission lines for the project will be constructed with a minimum of 5.5 feet between conductor/ground wires. The addition of a 600-foot-long segment of transmission line in the area would not result in an increase of avian electrocution in the area. The risk of electrocution is therefore less than significant.

8.2.2.3.4 Noise and Lights from Plant Operations

The project site is currently an agricultural field; however, several industrial, commercial and residential areas are located in the immediate area including an electrical substation, a cement/gravel plant and a wood recycling facility. Operation of the plant would result in increased noise and lighting. Noise affects are described in detail in Section 8.7. Increased noise and lighting from the facility are not expected to have an adverse affect on wildlife species and most of the species in the project area have habituated to the existing noise and light conditions of the area. The effects of noise and lighting from the project would be less than significant.

8.2.3 Cumulative Impacts

The Inland Empire region of Riverside County is one of the fastest growing areas in California. County and municipal authorities, working in cooperation with federal and state biological resources management agencies have had to foresee and plan for the cumulative

impacts of rapid urbanization. One result of this planning for cumulative effects has been the Western Riverside County MSHCP, which is a plan to conserve sensitive species habitat in core areas as well as strategic areas of habitat linkage. The MSHCP is a comprehensive program to mitigate the cumulative effects of growth in the Inland Empire and all new projects approved in the County are subject to its requirements. The SVEP project is compliant with the MSHCP and will also participate in mitigation of potential cumulative impacts to Stephens' kangaroo rat by paying per-acre fees stipulated by the Stephens' kangaroo rate HCP. Therefore, cumulative impacts to biological resources will be less than significant.

8.2.4 Proposed Mitigation and Monitoring

The following Sections describe the proposed mitigation and monitoring measures intended to avoid and minimize effects or compensate for potential adverse effects of the project on biological resources.

8.2.4.1 General Project Construction

The following measures would be implemented in all construction areas:

- Worker environmental awareness training will be provided for all construction personnel. Training will include information on sensitive biological resources and will explain the mitigation measures required to minimize project related impacts during construction.
- Provide monitoring by a qualified designated biologist and on site monitoring by qualified biologists during construction activities near sensitive resources. Construction monitoring and compliance reports will be prepared and submitted.
- Prepare a Biological Resources Mitigation and Monitoring Plan that outlines how the applicant would implement the mitigation measures developed in order to prevent adverse impacts to threatened or endangered species.
- Conduct preconstruction surveys for special-status species in potential impact areas during the spring months. Surveys will include any potential burrowing owl habitat within 500 feet of the construction areas.
- To the extent practicable, sensitive resources (e.g., potential burrows, aquatic resources, rare plants,) will be avoided through construction exclusion zones clearly marked with fencing and signs. Seasonal pond MW-51, which is located near the non-reclaimable wastewater pipeline and is adjacent to McLaughlin Road, will be clearly marked as an exclusion zone during pipeline construction (see discussion below).
- All areas subject to temporary disturbance shall be restored to preconstruction conditions.

8.2.4.2 Worker Environmental Awareness Training

Site specific training will be designed to inform all on site construction personnel of the sensitive biological resources in the area, specific restrictions, protection measures, and individual responsibilities associated with the project. Training will be administered on site and will include oral, visual and written information. The presentation will cover construction

activities that may affect special-status species or sensitive resources and specific measures required to avoid or minimize impacts. Special emphasis will be placed on project specific protection measures as well as legal protections of special-status species and consequences of noncompliance.

8.2.4.3 Special-status Species

Focused surveys for special-status plants and wildlife species will be conducted for the project site and associated project linear features. The following mitigation and protective measures may be implemented in the event that special-status-species are identified during these or other surveys of the site.

8.2.4.4 Rare Plants

To the extent practicable impacts to rare plat populations will be designated as construction exclusion areas and will be protected by signs and fencing. In the event that rare plant populations can not be avoided mitigation may include seed collection, transplanting, or off site habitat compensation.

8.2.4.5 Vernal Pool Fairy Shrimp and Aquatic Habitats

Any aquatic habitats located within 250 feet of a work area will be designated as a construction exclusion zone and protected with fencing and signs. If surveys result in presence of suitable habitat for listed vernal pool crustaceans that can not be avoided mitigation for direct or indirect affects as a result of the project would be compensated through the purchase of vernal pool habitat at a USFWS approved mitigation bank. One seasonally ponded area (MW-51) has been reported within 250 feet of the proposed non-reclaimable wastewater pipeline. This area will be designated as a construction exclusion zone and protected with signs and fencing during construction.

8.2.4.6 Burrowing Owls

Focused survey will be conducted for the project area during the peak breeding season to identify potential burrowing owl nest locations. In the event that active burrows are identified during the surveys mitigation measures may include passive relocation and burrow exclusion (during non-breeding season), and/or restriction of construction activities within 150 feet of the burrow during the non-breeding season and 250 feet during the breeding season.

8.2.4.7 Small Mammals

Potential impacts to the Stephens' kangaroo rat and other special-status wildlife species will be offset by providing funds to support core conservation areas in western Riverside County in accordance with the Stephens' kangaroo Habitat Conservation Plan's mitigation program.

8.2.5 Applicable Laws, Ordinances, Regulations, and Standards

The following Sections describe the primary LORS that apply to potential impacts on biological resources in the project area. Table 8.2-3 provides a summary of the applicable LORS, responsible agencies, required permits and project compliance.

TABLE 8.2-3
Laws, Ordinances, Regulations and Standards Applicable to the Sun Valley Energy Center Biological Resources

Regulation	Purpose	Regulatory Agency	Permit/Approval	Applicability (AFC Section Explaining Project Compliance)
Federal				
Federal Endangered Species Act **(**16 USC § 153 et seq.)	Protects federally listed threatened and endangered plants and animals and their critical habitat	U.S. Fish and Wildlife Service	Incidental Take Permit	Federally-listed threatened and Endangered species potentially affect by the project are covered under existing Habitat Conservation Plans. Mitigation guidelines established in will be followed and fees will be paid by the applicant (Sections 8.2.1.5, 8.2.1.6, and 8.2.2.2).
Migratory Bird Treaty Act (16 USC § 703–711)	Prohibits non-permitted take if migratory birds	U.S. Fish and Wildlife Service and California Department of Fish and Game	Incidental Take Permit and California Energy Commission Conditions	Applicant will avoid take of migratory birds by construction g transmission lines accordance with the guidelines provided by the Avian Power Line Interaction Committee and implementation of mitigation measures designed to avoid impact to burrowing owls. (Sections 8.2.1.5 and 8.2.2.3)
Bald and Gold Eagle Protection Act (16 USC 668)	Specifically protects bald and golden eagles	U.S. Fish and Wildlife Service	NA	Project will not affect bald or golden eagles (Sections 8.2.1.5 and 8.2.2.3).
Section 404 of the Clean Water Act	Requires a permit for fill jurisdictional waters of the United States, including wetlands	U.S. Army Corps of Engineers	Section 404 Individual or Nation-wide Permit	The project will not affect wetlands or waters of the United States (Section 8.2.1.6).
State				
California Endangered Species Act and Title 14, California Code of Regulations	Protects state listed threatened and endangered plants and animals	California Department of Fish and Game	2801 Incidental Take Permit	State-listed threatened and Endangered species potentially affect by the project area covered under existing Habitat Conservation Plans. Mitigation guidelines established in will be followed and fees will be paid by the applicant (Sections 8.2.1.5, 8.2.1.6, and 8.2.2.2).
Fully Protected Species	Prohibits take of any fully-protected bird, mammal, reptile or fish	California Department of Fish and Game	N/A	Applicant will avoid take of any fully protected species (Sections 8.2.1.5, 8.2.1.6, and 8.2.2.2).
Nesting Birds		California Department of Fish and Game	N/A	Nest surveys and mitigation measures will be implemented to avoid take of any nest birds in the proposed project area (Sections 8.2.1.6 and 8.2.2.2)

TABLE 8.2-3
Laws, Ordinances, Regulations and Standards Applicable to the Sun Valley Energy Center Biological Resources

Regulation	Purpose	Regulatory Agency	Permit/Approval	Applicability (AFC Section Explaining Project Compliance)
Native Plant Protection Act and Fish and Game Code § 1900 et seq.	Designates state rare plants and provides specific protections measures	California Department of Fish and Game	Significant impacts on rare species require mitigation measures	Spring botanical surveys will be conducted for the project area and associated linear features and any rare plant populations will be avoided to the extent practicable (Sections 8.2.1.6 and 8.2.2.2).
Streambed Alteration Agreement, Fish and Game Code § 1600 et seq.	Protects waterways and adjacent riparian habitat	California Department of Fish and Game	Streambed alteration agreement	No riparian habitat is present in the project area. The project will not affect any wetlands or waters of the United States. Department of Fish and Game will be consulted in the event that any waterway would be crossed or otherwise impacted by project activities (Section 8.2.1.6).
Public Resources Code §§ 25500 and 25527	Prohibits siting of facilities in areas of critical biological concern	California Department of Fish and Game	N/A	No areas of critical biological concern are located in the immediate project vicinity (Sections 8.2.1.1 and 8.2.1.2).
Designated Ecological Preserved—Fish and Game Code § 1580	Designated natural areas such as refuges, natural sloughs, riparian habitats, vernal pools as significant wildlife areas	California Department of Fish and Game	N/A	No designated ecological preserves are located in or immediately adjacent to the project area or associated linear features (Sections 8.2.1.1 and 8.2.1.2).
Local				
Riverside County General Plan	Land use standards for protection of natural vegetation and wildlife	Riverside County	Grading Permit	Project will not impact any areas supporting natural habitat. Applicant will provide the county with copies of biological survey reports (Sections 8.2.1.1, 8.2.1.2, and 8.2.1.6).
Habitat Conservation Plan for the Steven's Kangaroo Rat in Western Riverside County	Established core conservation areas for the Steven's kangaroo rat	Riverside County Environmental Programs Department and the Riverside County Planning Department	Conditions of approval from the habitat conservation agencies.	Project area is located within the Habitat Conservation Mitigation Feed Area (Sections 8.2.1.5, 8.2.1.6, and 8.2.2.2).
Western Riverside County Multiple species Habitat Conservation Plan	Conservation and management of natural areas and over 240 species encompassing approximately 1.3 million acres in western Riverside County	Riverside County Environmental Programs Department and the Riverside County Planning Department	Conditions of approval from the habitat conservation agencies.	Project area is located within the Habitat Conservation Plan area. Mitigation fess will be determined on the basis of project related impacts and will be paid by the applicant (Sections 8.2.1.5, 8.2.1.6, and 8.2.2.2).

8.2.5.1 Federal LORS

8.2.5.1.1 Federal Endangered Species Act

The federal Endangered Species Act (16 USC § 153 et seq.) states that any project that has the potential to "take" any federally listed threatened or endangered species must consult with the USFWS. The federal ESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct" or any activity that "may include significant habitat modification or degradation" (50 CFR § 17.3). Take of a listed species is prohibited under the ESA unless it has been authorized under a Section 7 or Section 10 Incidental Take Authorization and all appropriate measures have been implemented to minimize and mitigate for potential impacts to the listed species. Candidate and Species of Concern are not protected under the ESA; however, the USFWS advises that such species could be elevated to listed status at anytime and should be regarded with special consideration.

8.2.5.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (16 USC § 703 – 711) includes provisions for protection of all migratory birds, including nests and eggs. Take of migratory birds is prohibited unless authorized by the USFWS.

8.2.5.1.3 Bald and Gold Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC 668) specifically protects bald and golden eagles from harm or trade in parts.

8.2.5.1.4 Section 404 of the Clean Water Act

Section 404 of the Clean Water Act (33 USC § 1251 et seq.) gives the U.S. Army Corps of Engineers authority to regulated discharge of fill materials into waters of the United States, including wetlands.

8.2.5.2 State LORS

8.2.5.2.1 California Fish and Game Code

There are several key provisions in the California Fish and Game Code and related sections of the California Code of Regulations that apply protection for fish and wildlife. These include the California Endangered Species Act, as well as other provisions and regulations.

The California Endangered Species Act (California Fish and Game Code Section 2050 et seq.) includes provisions for the protection and management of plant and animal species listed as endangered or threatened, or designated as candidates for such listing. Under the CESA it is unlawful to "hunt, pursue, capture, or kill" a state listed species without prior authorization from the California Department of Fish and Game. The CESA also requires that any authorized action "is not likely to jeopardize the continued existence of any endangered or threatened species…or result in the destruction or adverse modification of habitat essential to the continued existence of the species" (§ 2090).

Title 14, California Code of Regulations, Sections 670.2 and 670.5 lists animals designated as threatened or endangered in California as well as species of concern. Species of concern are those that are considered to be indicators of regional habitat changes or are those species which may be considered for future listing as threatened or endangered. Species of concern do not have any legal status, but are taken into consideration when decisions are being made concerning the future of any land parcel.

Fully Protected Species (California Fish and Game Code Sections 3511, 4700, 5050, and 5515) provides a list of birds, mammals, amphibians, and reptiles that are "fully protected" under state law. Such species may not be hunted, captured or killed without a permit issued by the CDFG.

Nesting Birds (California Fish and Game Code Section 3503) states that it is unlawful to take, posses, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any other regulation made pursuant thereto.

Native Plant Protection Act (California Fish and Game Code § 1900 et seq.) lists state-designated rare and endangered plants and provides specific protection measures for identified populations.

8.2.5.2.2 California Environmental Quality Act

The California Environmental Quality Act (CEQA) (Public Resources Code Section 15380) requires that effects of a project on environmental resources be analyzed and assessed using criteria determined by the lead agency. The CEC certification process is equivalent to CEQA environmental review.

8.2.5.2.3 Warren Alquist Act

The Warren-Alquist Act (California Public Resources Code § 25523(a); 20 CCR §§ 1752, 1752.5, 2300-2309, and Chapter 2. Subchapter 5. Article 1. Appendix B. Part (i) requires the California Energy Commission to include in its decision provisions protection of environmental quality. In the context of biological resources, a proposed project is generally considered to have a significant effect on the environment if it will substantially affect a rare or endangered species (20 CCR § 15380).

8.2.5.3 Local LORS

8.2.5.3.1 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP is designed for the conservation and management of natural areas and over 240 species encompassing approximately 1.3 million acres. The plan includes all unincorporated areas of western Riverside County (west of the San Jacinto Mountains) and the cities of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet, and San Jacinto. The plan is designed to provide a coordinated conservation areas implementation program to maintain biological diversity throughout the region. The plan includes conservation of existing habitat, restoration of degraded lands, and management and monitoring of conservation areas. The provisions of the MSHCP provide mitigation for future impacts of planned urban and industrial development on species identified in the MSHCP.

Public and private Development, including construction of buildings, structures, infrastructure and all alterations of the land, that are carried out by Permittees, Participatory Special Entities, Third Parties Granted Take Authorization and others within the Plan Area, that are outside of the Criteria Area and Public Lands are permitted under the Plan, subject to consistency with MSHCP policies that apply outside the Criteria Area (such as policies related to Riparian and Riverine Areas and Vernal Pools, Narrow Endemic Plant Species, Additional Survey Needs and Procedures, and Funding/Fee Issues). Participating Special Entities shall also contribute to Plan implementation through payment of a fee based upon

the type of proposed activity, which shall be applicable to all activities in the Plan Area. For regional utility projects constructed to serve development, shall pay a fee or take such other actions as may be agreed to by the Regional Conservation Authority and the Wildlife Agencies.

8.2.5.3.2 Stephens' Kangaroo Rat Habitat Conservation Plan

The Stephens' kangaroo rat HCP is designed to acquire and manage lands dedicated to the conservation, preservation, restoration and enhancement of the SKR and its habitat. The plan covers "Actions by private land owners, local and regional public agencies, public and private utilities, and farmers that are otherwise lawful but constitute incidental take of Stephens' kangaroo rat as defined by the federal and State Endangered Species Acts (ESA)." A designated Fee Area for projects within the historic range of the species provides a mechanism for development activities to comply with requirements of the Federal Endangered Species Act and California State Endangered Species Act without the need to secure individual permits and agreements. All of the project features are included in the HCP Fee Area.

8.2.5.3.3 Riverside County Comprehensive General Plan

The Environmental Hazards and Resources Element of the General Plan contains the following Land Use Standards relative to Wildlife and Vegetation:

- Detailed biological reports, including inventories, impact assessment and mitigation shall be prepared and submitted
- Disruption of sensitive vegetation shall be kept to a minimum, and adequate measures to protect vegetative species shall be taken
- Where possible, landscaping shall be accomplished through the use of vegetation native to the project site
- Adequate provision shall be made for the retention of existing trees and other flora, and where necessary, immediate planting shall be planned and implemented

8.2.5.4 Project Compliance with LORS Applicable to Biological Resources

The applicant will work with regulatory, conservation and planning staff to ensure that the project is in compliance with all environmental regulations and permit requirements. The project facility has been sited in an area that has been zoned for industrial development and would not impact any natural habitats or ecologically sensitive areas. Biological surveys for special-status-species species will be conducted and the result of the reports will be provided to all applicable agencies. Impacts to special-status species will be avoided to the maximum extent possible through protection and mitigation measures and the applicant will provide funds to support special-status species and habitat protection and management through fees established by the western Riverside County habitat conservation plans.

8.2.6 Involved Agencies and Agency Contacts

Agencies and agency contacts relative to biological resources for project are provided in Table 8.2-4.

TABLE 8.2-4
Agency Contact Information

Agency/Address	Contact/Telephone	Permits/Reason for Involvement
U.S. Fish and Wildlife Service 6010 Hidden Valley Road Carlsbad, CA 92011	Christine L. Medak Fish and Wildlife Biologist (760) 431-9440 ext. 298	Federal Threatened and Endangered Species—Incidental Take Permit
U.S. Army Corps of Engineers, 911 Wilshire Blvd. Los Angeles, CA 90017	Staff (213) 452-3425	Clean Water Act Section 404
California Department of Fish and Game Region 6, 3602 Inland Empire Blvd., Suite C-220 Ontario, CA 91764	Staff (909) 484-0167	Incidental Take Permit for State-Listed Threatened Endangered Species and Streambed Alteration Agreement
Riverside County Environmental Programs Department	Staff (951) 955-6097	Western Riverside County Multi-Species Habitat Conservation Plan and Stephens' kangaroo rat Habitat Conservation Plan Survey and Mitigation Requirements
Riverside County Planning Department	Staff (951) 955-3200 ext. 3	Western Riverside County Multi-Species Habitat Conservation Plan and Stephens' kangaroo rat Habitat Conservation Plan Survey and Mitigation Fees

8.2.7 Permits Required

Federal state and local permits required for anticipated biological resource impacts are summarized Table 8.2-5. The listed agencies will be contacted to obtain the necessary permits at the appropriate time.

TABLE 8.2-5
Permits Required

Permit	Authority	Requirements	Schedule
Federal and State Threatened and Endangered Species Incidental Take Permit	U.S. Fish and Wildlife Service and the California Department of Fish and Game	Incidental take permits have been issued to Riverside County through Section 10 process. Applicant will coordinate with local agencies to ensure compliance with assessment, avoidance, mitigation and compensation for covered species.	Upon completion of biological surveys and habitat assessments it is estimated that authorization from the local agencies will be obtained within 4 to 6 weeks.
Section 404 Permit (Nationwide #12)	U.S. Army Corps of Engineers	Wetland delineation verified by the Corps.	If required, authorization form the Corps expected to take 6 to 8 weeks.
Section 1603 Streambed Alteration Agreement	California Department of Fish and Game	Streambed Alteration Agreement Application Package Submittal.	If required, authorization expected in less than 4 weeks after application package has been submitted.
Riverside County Grading Permit*	Riverside County	Submittal of Biological Survey Reports.	Authorization expected in 4 to 6 weeks after application and reports have been submitted.

* This permit would be required, but for the exclusive authority of the CEC to license thermal power plants greater than 50 MW in California.

8.2.8 References

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TABLE 8.2-1
Special-Status Species Potentially Occurring in Sun Valley Project Area

Scientific Name	Common Name	Status[a]	Season[b]	Primary Habitat[c]	Potential Occurrence in Project Area	Comments
Plants						
Abronia villosa var. *aurita*	Chaparral sand-verbena	CNPS 1B	January-September	Sandy areas in chaparral and coastal scrub	Unlikely due to lack of suitable habitat	Often associated with sandy washes
Allium munzii	Munz's onion	FE, CT	April-May	Native grasslands and openings in Riverside sage scrub	Unlikely due to lack of suitable habitat	Found in areas with heavy clay soils
Ambrosia pumila	San Diego ambrosia	FE	April-October	Chaparral, coastal scrub, grasslands, and vernal pools	Unlikely due to lack of suitable habitat and extreme limited range	Known from only three locations in western Riverside County near Lake Elsinore and Murieta
Atriplex coronata var. *notatior*	San Jacinto Valley crownscale	FE	April-May	Playas, vernal pools, chenopod scrub, valley and foothill grasslands	Unlikely due to lack of suitable habitat	Associated with in highly alkaline, silty-clay soils
Atriplex serenana var. *davidsoni*	Davidson's saltscale	CNPS 1B	April-October	Alkaline flats along the San Jacinto River.	Unlikely due to lack of suitable habitat	Includes *A. coulteri* and *A. pacifica* which were misapplied in western riverside county
Atriplex parishii	Parish's brittlescale	CNPS 1B	June-October	Alkaline flats along the San Jacinto River.	Unlikely due to lack of suitable habitat	Previously thought to be extinct, one population rediscovered west of Hemet in 1993
Brodiaea filifolia	Thread-leaved brodiaea	FT, CE	March-June	Vernal pools, playas, cismontane woodland, grasslands, and coastal scrub	Unlikely due to lack of suitable habitat	Species is most often associated with clay or silty-clay alkaline soils
Caulanthus simulans	Payson's jewelflower	CNPS 4	March-June	Coastal scrub	Unlikely due to lack of suitable habitat and limited distribution	Species is found on the eastern foothills near Aquanga and Vail Lake

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Centromadia pungens spp. *laevis*	Smooth tarplant	CNPS 1B	April-September	Alkali scrub, alkali playas, riparian woodland, watercourses, alkaline grasslands, croplands	May occur in ruderal areas and along edges of agricultural fields	This species is tolerant of rural and agricultural land use and often found on fine or alkaline soils on the San Jacinto River Basin
Chorizanthe parryi var. *parryi*	Parry's Spineflower	CNPS 3	April-June	Coastal scrub and chaparral	Unlikely due to lack of suitable habitat	Restricted to open sites, often on gravelly slopes
Chorizanthe polygonoides var. *longispina*	Long-spined spineflower	CNPS 1B	April-June	Chaparral, coastal sage scrub, meadows, and grassland	Unlikely due to lack of suitable habitat and limited distribution	Clay soils
Convolvulus simulans	Small-flowered morning-glory	CNPS 4	March-July	Chaparral, coastal sage scrub, and grassland	Unlikely due to lack of suitable habitat and limited distribution	Deep clay soils
Dodecahema leptoceras	Slender-horned Spineflower	FE, CE,	April-June	Flood-deposited terraces, chaparral, coastal sage scrub	Unlikely due to lack of suitable habitat and limited distribution	Associated with on sandy or gravelly soils
Erodium macrophyllum	Round-leaved filaree	CNPS 2	March-May	Grassland and woodland	Unlikely due to lack of suitable habitat	Associated with clay soils
Eryngium aristulatum var. *parishii*	San Diego button-celery	CNPS 1B	April-June	Coastal scrub, grassland, vernal pools	Unlikely due to lack of suitable habitat and limited distribution	In western Riverside County this species is only known from the Santa Rosa Plateau
Fritillaria biflora var. *biflora*	Chocolate lily	HCP	March-April	Coastal scrub, grassy slopes	Unlikely due to lack of suitable habitat	Uncommon in western Riverside County, considered to be a species of local concern

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Scientific Name	Common Name	Status[a]	Season[b]	Primary Habitat[c]	Potential Occurrence in Project Area	Comments
Galium angustifolium ssp. *gracillimum*	Slender bedstraw	CNPS 4	May-July	Joshua tree, desert scrub	No suitable habitat	Species is primarily found in eastern Riverside County
Harpagonella palmeri ssp. *palmeri*	Palmer's grapplinghook	CNPS 2	July-November	Chaparral, coastal scrub	Unlikely due to lack of suitable habitat	Associated with clay soils
Hordeum intercedens	Vernal barley	CNPS 3	March-June	Mesic grasslands, vernal pools, and large saline flats or depressions	Unlikely due to lack of suitable habitat	Often mixed with *H. depressum* and not always clearly distinct
Limnathes gracilis ssp. *parishii*	Parish's meadowfoam	CE	April-June	Meadows, seeps, and vernal pools. Often bordering lakes and streams.	Unlikely due to lack of suitable habitat	In western Riverside County, species is known from a single vernal pool on the Santa Rosa Plateau
Microseris douglasii ssp. *platycarpha*	Small flowered microseris	CNPS 4	March-May	Coastal scrub, woodland, grassland, vernal pools	Unlikely due to lack of suitable habitat	Associated with heavy clay soils
Myosurus minimus ssp. *apus*	Little mousetail	CNPS 3	March-June	Vernal pools, seasonally wet swales	Unlikely due to lack of suitable habitat	Typically associated with alkaline soils
Navarretia fossalis	Spreading navarretia	FT	April-June	Vernal pools, swales, playas	Unlikely due to lack of suitable habitat	Generally on saline-alkaline soils
Opuntia parryi var. *serpentine*	Snake cholla	HCP	April-May	Chaparral, coastal scrub	Unlikely due to lack of suitable habitat	Potentially misapplied? Species not reported from Western Riverside County
Orcuttia californica	California orcutt grass	FE, CE,	April-August	Vernal pools	Unlikely due to lack of suitable habitat	Endemic to Southern California and Baja California typically found on alkaline soils

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Scientific Name	Common Name	Status[a]	Season[b]	Primary Habitat[c]	Potential Occurrence in Project Area	Comments
Insects and Crustacea						
Branchinecta lynchi	Vernal pool fairy shrimp	FT	Resident	Seasonal freshwater wetlands (vernal pools and swales)	Limited habitat in project area along non-reclaimable wastewater line	Requires at least of 2 weeks inundation to complete lifecycle
Euphydryas editha quino	Quino checkerspot butterfly`	FE	Resident	Open areas in chaparral and coastal scrub	Known to occur on hillsides, 3 miles from project site. No suitable habitat at project site.	Larvae require high densities of food plants such as *Plantago erecta*, *Plantago insularis*, and *Orthocarpus purpurascens* nearby
Streptocephalus woottoni	Riverside fairy shrimp	FE	Resident	Deep, cool water vernal pools in lowland areas	Limited habitat may be present in the project area along non-reclaimable wastewater line	Species requires prolonged inundation lasting through the warmer weather of late spring
Reptiles and Amphibians						
Aspidoscelis hyperythra	Orange-throated whiptail	CSC	Resident	Coastal scrub habitats, particularly areas with California buckwheat and black sage	No suitable habit in the project area	Open slopes adjacent to terraces with woody perennials may represent the best available habitats
Aspidoscelis tigris stejnegeri	Coastal western whiptail	NA	Resident	Coastal scrub in areas with sparse vegetation; also woodland, open dry forest, and riparian habitats	No suitable habit in the project area	
Bufo californicus	Arroyo toad	FE	Resident	Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	No habitat in project area	Clear, standing water is required for egg deposition

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Scientific Name	Common Name	Status[a]	Season[b]	Primary Habitat[c]	Potential Occurrence in Project Area	Comments
Clemmys marmorata pallida	Southwestern pond turtle	CSC	Resident	Slack- or slow-water aquatic habitat with suitable cover and basking sites. Adjacent upland areas typically provide overwintering and estivation sites.	No suitable habit in the project area	Hatchlings require shallow water habitat with relatively dense submergent or short emergent vegetation in which to forage
Charina trivirgata roseofusca	Coastal rosy boa	HCP	Resident	Coastal sage scrub, chaparral and riparian areas	No suitable habitat in project area	Prefers rocky areas with moderate to dense vegetative cover
Coleonyx variegates abbotti	San Diego banded gecko	HCP	Resident	Chaparral and desert scrub to open sand dunes	No suitable habitat in project area	Species is uncommon in coastal scrub and chaparral, preferring rocky outcrops in these habitats
Crotalus ruber ruber	Red-diamond rattlesnake	CSC	Resident	Prefer chamise- and red shank-dominated habitats but also found in coastal sage scrub and desert slope scrub	No suitable habit in the project area	Occurs more frequently in habitats with heavy brush associated with large rocks or boulders
Phrynosoma coronatum	Coast horn lizard	CSC	Resident	Coastal scrub, chamise chaparral, annual grassland with scattered perennial seepweed or saltbush, and riparian woodlands	No suitable habit in the project area	Historically most abundant in relict lake sand dunes and old alluvial fans bordering the San Joaquin Valley
Rana aurora draytoni	California red-legged frog	FT	Resident	Lowland streams, wetlands, riparian woodlands, and livestock ponds	No suitable habit in the project area	Adults use adjacent upland habitats, cold water ponds or quiet pool areas with vegetation required for breeding
Salvadora hexalepis virgultea	Coast patch-nosed snake	CSC	Resident	Coastal chaparral, desert scrub, washes, sandy flats and rocky areas	No suitable habit in the project area	

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Sceloporus orcutti orcutii	Granite spiny lizard	HCP	Resident	Rock outcrops in chaparral, coastal sage scrub, riparian areas, and pinyon-juniper woodlands	No suitable habit in the project area	Species is most abundant lizard on rock outcrops in Riverside County
Spea hammondii	Western spadefoot	CSC	Resident	Cropland/hedgerows, grasslands, playas and salt flats, shrublands, chaparral, and woodlands	Low potential for occurrence due to limited breeding habitat	Requires temporary rain-pools that last a minimum of 3 weeks in order to metamorphose successfully
Xantusia henshawi	Granite night lizard	HCP	Resident	Rock outcrop crevices associated with desert chaparral and woodlands	No suitable habit in the project area	Species is almost completely confined to granodiorite or metavolcanic rocky areas within suitable habitats
Birds						
Accipiter cooperii	Cooper's hawk	CSC	Resident	Dense stands of live oak, riparian deciduous, or other forest habitats near water	Potential nest trees near project such as large eucalyptus on west side of the Valley sub-station.	Tolerant of human disturbance and habitat fragmentation, species may breed in suburban and urban settings near forest edge habitat.
Accipiter striatus velox	Sharp-shinned hawk	CSC	Migrant / Winter Resident	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine	No suitable habit in the project area	Prefers riparian habitats
Agelaius tricolor	Tricolor blackbird	CSC	Resident	Breeds near fresh water wetlands with dense emergent or shrubby vegetation; feeds in grassland and croplands.	No suitable breeding habitat in project area, but foraging habitat is present	Nest may be located up to 4 miles from foraging areas

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Aimophila ruficeps canescens	Rufus-crowned sparrow	CSC	Resident	Grass-covered hillsides, coastal sage scrub, and chaparral	No suitable habit in the project area	Optimal habitat consists of sparse, low brush or grasses on hill slopes with scattered boulders and rock outcrops
Ammodramus savannarum perpallidus	Grasshopper sparrow	HCP	Summer	Grasslands with scattered tall forbs and shrubs	Ruderal and cropland areas may provide suitable habitat	Prefers moderately open grasslands with patches of bare ground
Amphispiza belli belli	Bell's sage sparrow	CSC	Resident	Coastal sage scrub and chamise chaparral	No suitable habit in the project area	Prefers habitats with relatively low, scattered shrubs
Aquila chrysaetos	Golden eagle	CSC, FP	Resident	Rolling foothills, mountain areas, sage-juniper flats, desert	Limited foraging habitat	Nests on cliffs of all heights and in large trees in open areas.
Buteo regalis	Ferruginous hawk	CSC	Winter	Grasslands, sagebrush flats, desert scrub, low foothills and surrounding valleys	Croplands and other open areas provide foraging habitat	Requires large, open tracts of grasslands, sparse shrub, or desert habitats with elevated structures such as lone trees or utility poles for nesting
Buteo swainsoni	Swainson's hawk	CT	Spring and fall transient	Forages in grasslands, grain fields, alfalfa crops, and pastures	Cropland provide foraging habitat	During migration, species will rest and feed in grasslands and harvested fields, especially where grasshoppers are numerous, often perching on fence posts, telephone poles, and power poles

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Campylorhynchus brunneicapillus cousei	Cactus wren	CSC	Resident	Occurs almost exclusively in thickets of cholla and prickly pear dominated stands of coastal sage scrub on the lower slopes of the coast ranges	No suitable habitat	Limited to habitat areas with thorny shrubs and trees for nesting sites
Cathartes aura meridionalis	Turkey Vulture	HCP	Summer	Open stages of most habitats that provide adequate cliffs or large trees for nesting, roosting, and resting	Foraging and roosting habitat present	Nest sites located in areas away from human disturbance
Charadrius montanus	Mountain plover	FT	Winter	Grasslands, croplands, open areas with scattered shrubs	Potential habitat for winter migrants	
Circus cyaneus hudsonius	Northern harrier	CSC	Resident	Meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands	Limited foraging habitat	Prefers to nest near marshes, rivers, or ponds, but may also nest in grassy valleys or on grass and sagebrush flats several miles from the nearest water
Dendroica niger borealis	Yellow warbler	CSC	Summer	Breeds in riparian woodlands, montane chaparral, open ponderosa pine and mixed conifer habitats with substantial amounts of brush	No suitable habitat	
Elanus leucurus majusculus	White-tailed kite	CR, FP	Resident	Open grasslands, croplands, wetlands, riparian, and oak woodlands	Foraging habitat	Substantial groves of dense, broad-leafed deciduous trees are used for nesting and roosting
Empidonax traillii extimus	Southwestern willow flycatcher	FE, CE	SUMR	Riparian woodlands.	No suitable habitat	State listing includes all subspecies

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Eremophila alpestris actia	California horned lark	CSC	RES	Grasslands, croplands, open chaparral and forests	Moderate in grain fields and ruderal / fallow areas	Prefers grasslands and other open habitats with low, sparse vegetation
Falco mexicanus	Prairie falcon	CSC	Resident	Grasslands, savannahs, rangeland, croplands, and desert scrub	Foraging habitat	Usually nests in a scrape on a sheltered ledge of a cliff overlooking a large, open area
Falco columbarius	Merlin	CSC	Winter / Migrant	Open grasslands, croplands, savannahs, woodlands, lakes, wetlands, and early successional stages	Foraging habitat	
Haliaeetus leucocephalus	Bald Eagle	FT, CE	Winter	Associated with large deep inland bodies of water	No suitable Habitat	Wintering sites are generally close to open water in areas with trees that provide perch site and night roosts
Lanius ludovicianus gambeli	Loggerhead shrike	CSC	Resident	Found in a variety of open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches	Foraging Habitat	Occurs only rarely in heavily urbanized areas, but often found in open cropland
Nycticorax nycticorax	Black-crowned night heron	HCP	Resident	Marshes, ponds, reservoirs, and estuaries, will also use man-made ditches, canals, reservoirs, and wet agricultural fields	No Suitable Habitat	
Plegadis chihi	White-faced ibis	CSC	Summer / Migrant	Fresh emergent wetland, shallow lacustrine waters, and muddy ground of wet meadows and irrigated, or flooded, pastures and croplands.	No Suitable Habitat	Nests in dense, freshwater emergent wetlands

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Polioptila californica californica	Coastal California gnatcatcher	FT	Resident	Occurs almost exclusively in the coastal sage scrub	No suitable habitat in the project area.	
Speotyto cunicularia hypugaea	Burrowing owl	CSC	Resident	Grasslands, lowland scrub, croplands, rangelands, and a variety of urban habitats such as golf courses, cemeteries, and vacant lots	Suitable Habitat Present	Requires the use of small mammal burrows (California ground squirrels) or other burrows for roosting and nesting cover
Sterna antillarum browni	California least tern	FE, CE	Summer	Nests along the coast from San Francisco Bay south to Northern Baja California.		Colonial breeder on bare or sparsely vegetated, flat substrates, sand beaches, alkali flats, land fills, or paved areas
Vireo bellii pusillus	Least Bell's vireo	FE, CE	Summer	Nests along margins of bushes on twigs projecting into pathways in low riparian areas in the vicinity of water or in dry river bottoms.		
Wilsonia pusilla pileolata	Wilson's warbler	HCP	Summer Migrants	Montane meadows and low, dense willow thickets often on steep slopes	No suitable habitat	Prefers native willow habitat during migration

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Scientific Name	Common Name	Status[a]	Season[b]	Primary Habitat[c]	Potential Occurrence in Project Area	Comments
Mammals						
Canis latrans clepticus	Coyote	HCP	Resident	Grasslands, semiarid sagebrush, broken forests and open lands adjacent to urban areas	Suitable habitat present	Although species is not at great risk of extirpation from the MSHCP planning area, it appears to be key species in maintaining species richness in smaller habitat fragments.
Chaetodipus californicus femoralis	Dulzura pocket mouse	CSC	Resident	Coastal scrub, chaparral and grasslands	Low potential to occur in ruderal habitats in project vicinity	Prefers edges of chaparral and grassland habitats, but species may occur in disturbed ruderal habitats
Chaetodipus fallax fallax	San Diego pocket mouse	CSC	Resident	Coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland	Low potential to occur in ruderal habitats in project vicinity	Prefers sandy herbaceous areas with rocks or course gravel
Dipodomys stephensi	Stephens' kangaroo rat	FE, CT	Resident	Coastal scrub and grassland habitats	Project site is within the historic range of this species, low potential for occurrence due to lack of suitable habitat	Prefers buckwheat and chamise and grasslands with brome and filaree
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE	Resident	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains.	No suitable habitat	Needs early to intermediate seral stages

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Scientific Name	Common Name	Status[a]	Season[b]	Primary Habitat[c]	Potential Occurrence in Project Area	Comments
Eumops perotis californicus	Western mastiff bat	CSC	Resident	Coastal scrub, chaparral, grassland, croplands and woodlands	Foraging habitat is present, limited roosting habitat in project vicinity	Roost sites include crevices in cliff faces, trees buildings, and tunnels
Lasiurus xanthinus	Western yellow bat	CNDDB	Resident	Riparian, desert wash and palm oasis habitats	No suitable foraging or roosting habitat	Prefers palm trees for roost sites; forages over water and among trees
Lepus californicus bennettii	San Diego black-tailed jackrabbit	CSC	Resident	Coastal scrub and low grasslands	Low potential due to limited suitable habitat	Species typically avoids areas with high grasses and dense shrub cover
Onychomys torridus ramona	Southern grasshopper mouse	CSC	Resident	Desert scrub, coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats	No suitable habitat in the project area	Prefers areas with low to moderate shrub cover
Neotoma lepida intermedia	Desert woodrat	HCP	Resident	Shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth	No suitable habitat	In coastal sage scrub habitats it is almost always found in areas with prickly pear
Perognathus longimembris brevinasus	Los Angeles pocket mouse	CSC	Resident	Coastal sage and grasslands	Low potential due to limited suitable habitat	Prefers areas with low to moderate shrub cover
Puma concolor	Mountain Lion	HCP	Resident	Woodland, chaparral, and riparian	No suitable habitat	
Sylvilagus backmanii cinerascens	Brush rabbit	HCP	Resident	Chaparral	No Suitable Habitat	May also occasionally occur in coastal scrub and oak woodlands

TABLE 8.2-1
Special-Status Species Potentially Occurring in Sun Valley Project Area

Notes:

[a] **Status**.
Federal Status
FE = Federally listed as endangered
FT = Federally listed as threatened

State Status
CE = State listed as endangered
CT = State listed as threatened
CSC = California Species of Concern

California Native Plant Society (CNPS) Status
1A = Plants presumed extinct in California
1B = Plants rare, threatened, or endangered in California, but more common elsewhere
2 = Plants rare, threatened, or endangered in California, but more common elsewhere
3 = Plants about which we need more information—a review list
4 = Plants of limited distribution—a watch list

Regional Status
HCP – Identified as a key species in the Western Riverside County Multi-Species Habitat Conservation Plan, but lacks federal- or state-level status.

[b] **Season**. Blooming period for plants. Season of use for animals.

[c] **Primary Habitat**. Most likely habitat association.

Sources:

CDFG, 2005.
CNPS, 2005.
USFWS, 2005 (Species with highly restricted ranges or those found only in eastern Riverside County were not included.)
Dudek and Associates, Inc. 2003.