

D.4 BIOLOGICAL RESOURCES

This section describes the existing conditions and potential impacts related to Biological Resources in the area of the proposed El Casco System Project (Proposed Project or Project). Section D.4.1. provides a description of the affected environment. Applicable rules and regulations are introduced in Section D.4.2. Significance criteria used to evaluate potential impacts of the Proposed Project and alternatives are discussed in Section D.4.3. Applicant-Proposed Measures (APMs), which are stipulations incorporated into the description of the Proposed Project and/or alternatives are presented in Section D.4.4. Analysis of potential impacts and mitigation measures for the Proposed Project is located in Section D.4.5, while analyses of potential impacts and mitigation measures for alternatives to the Proposed Project are located in Sections D.4.6 through D.4.8. A summary table of all impacts and mitigation measures related to Biological Resources for the Proposed Project and alternatives is presented in Section D.4.9.

A biological resources assessment, consisting of a literature review, database search, and biological surveys, was conducted for the Proposed Project. The purpose of the assessment was to determine existing biological resources (with special emphasis on sensitive plant species, sensitive wildlife species, wildlife corridors, and sensitive habitats) that occur within the vicinity of the Proposed Project and to analyze the affects of the Proposed Project on biological resources.

D.4.1 Environmental Setting for the Proposed Project

D.4.1.1 Literature Review

A literature search was performed prior to conducting the field portion of the assessment. The Proposed Project route spans portions of the U.S. Geological Survey's (USGS) El Casco, Beaumont, Cabazon, and Yucaipa California 7.5' topographic quadrangles. A search of the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB) was conducted for the four quadrangles to determine special-status plants, wildlife, and vegetation communities that have been documented within the vicinity of the Proposed Project. The following seventeen adjacent quadrangles were also included in the database search due to their proximity to the Proposed Project:

- Big Bear Lake
- Catclaw Flat
- Forest Falls
- Harrison Mountain
- Keller Peak
- Lake Fulmor
- Lakeview
- Perris
- Redlands
- Riverside East
- San Bernardino North
- San Bernardino South
- San Gorgonio Mountain
- San Jacinto Peak
- San Jacinto
- Sunnymead
- White Water

Additional data regarding the potential occurrence of special-status species and policies relating to these sensitive natural resources were gathered from the following sources:

- State and federally listed endangered and threatened animals of California (CDFG, 2005a)
- Special Animals List (CDFG, 2005b)
- California Department of Fish and Game Natural Diversity Database (CNDDDB, 2007)
- Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2007)
- Western Riverside County Multiple Species Habitat Conservation Plan (RCIP, 2004)

- Proponent's Environmental Assessment for the El Casco System Project (SCE, 2007a)
- El Casco Substation System Project Biotechnical Report (Appendix 4.1 of this EIR)
- Biological Resources Technical Report for the Southern California Edison El Casco System Project, Riverside County, California (Jones & Stokes, 2007) (Appendix 4.1)
- Jurisdictional Delineation for the Southern California Edison El Casco System Project in the Cities of Beaumont and Banning, Riverside County, California (Jones & Stokes, 2007) (Appendix 4.2 of this EIR)
- El Casco System Project Habitat Assessment for Sensitive Species (Varanus, 2007)
- Final Environmental Impact Report/Environmental Impact Statement for Devers-Palo Verde No. 2 Transmission Line Project (Aspen, 2006)
- Report of Stephen's Kangaroo Rat Habitat Assessment and Small Mammal Trapping for Sunset Substation and Transmission and Distribution Project (Varanus, 2006)
- Species known to occur within the planning area, based on historic range and field observations
- Species likely to occur within the planning area, based on the distribution of the species and habitat suitability
- Species that could be affected by the Proposed Project, because of their presence in areas adjacent to the Proposed Project area

This information, combined with field observations, was used to generate a list of special-status plant and animal species that may have the potential to occur within the Project footprint and adjacent areas. For the purposes of this assessment, special-status species are defined as plants or animals that:

- Have been designated as either rare, threatened, or endangered by California Department of Fish and Game (CDFG) or the U.S. Fish and Wildlife Service (USFWS), and are protected under either the California or Federal Endangered Species Act (ESA);
- Are candidate species being considered or proposed for listing under these same acts;
- Are fully protected by the California Fish and Game Code, Sections 3511, 4700, 5050, or 5515; or
- Are of expressed concern to resource/regulatory agencies, or local jurisdictions.

D.4.1.2 Survey Methodology

The Proposed Project lies within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Narrow Endemic Plant Species Survey Area (NEPSSA) 8, Criteria Species Survey Area (CSSA) 6, Burrowing Owl Survey Area, and Small Mammal Species Survey Area. At a minimum, to comply with the MSHCP, focused habitat suitability assessments are required for the following biological resources:

- Yucaipa onion
- Many-stemmed dudleya
- Nevin's barberry
- Round-leaved filaree
- Smooth tarplant
- Riverside fairy shrimp
- Vernal pool fairy shrimp
- San Bernardino kangaroo rat
- Los Angeles pocket mouse
- Burrowing owl
- Least Bell's vireo
- Southwestern willow flycatcher
- California yellow-billed cuckoo
- Riparian-riverine resources
- Vernal pools

Vegetation Community Mapping. SCE conducted vegetation mapping in the spring/summer of 2005, 2006, and 2007. Vegetation communities were mapped at the proposed El Casco Substation site and along the linear Project elements, including a 500-foot buffer on each side of the alignment. Communities were identified and classified according to the appropriate Holland (1986) code, and delineated with the aid of a global positioning system (GPS) unit accurate to within 5 meters, 1:4800 scale aerial photos, 1:24000 scale topographic maps, and a digital camera (SCE, 2007a).

Aspen Environmental Group (Aspen) conducted further reconnaissance surveys for vegetation communities in May and June 2007. The purpose of these surveys was to verify and update mapping data from previous years as the general Project area is in a period of intense urban growth and development.

Botanical Surveys. Botanical surveys focused on detecting special management plant species within the Project area, particularly narrow endemic species. Special management plant surveys were conducted in April and May 2005 during seasonally favorable phases for observing floral diversity in the western Riverside region. Although special management plant surveys were conducted throughout the Project area, surveys were intensified at unique microhabitats that potentially support more than one special management plant species. In May of 2007, SCE conducted additional habitat evaluations to demarcate potentially suitable habitat for Narrow Endemic Plant Species (NEPS), as required by the MSHCP (Appendix 4.1). Consequently, focused surveys were conducted for smooth tarplant (*Centromadia pungens* ssp. *laevis*), Nevin's barberry (*Berberis nevinii*), many-stemmed dudleya (*Dudleya multicaulis*), Yucaipa onion (*Allium marvinii*), and round-leaved filaree (*Erodium macrophyllum*) within all proposed limits of disturbance plus a 100-foot buffer. Data provided by SCE for the previous surveys was verified by Aspen botanists in May, June, and August 2007.

Wildlife Surveys. SCE conducted focused avian surveys and habitat assessments for least Bell's vireo and southwestern willow flycatcher in the spring and summer of 2005 and 2006 within the Project area. Areas where the fiber optic equipment would be installed on existing lines or within existing facilities were not surveyed as these areas would be avoided during the breeding season for migratory birds. Additionally, Aspen and Varanus Monitoring Services performed habitat assessments in June, July, and September 2007 for sensitive wildlife. These studies were conducted along all areas within 500 feet of SCE's existing right-of-way (ROW), outside of developed areas. Focused surveys were also conducted by SCE in the spring and summer of 2007 for Los Angeles pocket mouse (*Peregnathus longimembris brevinasus*), San Bernardino kangaroo rat (*Dipodomys merriami parvus*), burrowing owl (*Athene cunicularia*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) (Appendix 4.1). Aspen subcontractors conducted a site assessment and reconnaissance seining in August 2007 for sensitive fish species along portions of San Timoteo Creek that abut the Project area.

Riparian-Riverine Resources/Vernal Pool Surveys. SCE conducted an initial site survey to identify potential jurisdictional water features located adjacent to and within the Proposed Project site. This included all water features located within 50 feet of the proposed El Casco Substation footprint and within 50 feet of any proposed subtransmission line poles. In September of 2007, SCE performed wetland delineation at the locations previously identified (Appendix 4.2).

D.4.1.3 Existing Conditions

Regional Overview

The Proposed Project is located in northwestern Riverside County and southwestern San Bernardino County, with some elements in the incorporated Cities of Beaumont, Banning, Yucaipa, Redlands, and

Calimesa as well as unincorporated Riverside and San Bernardino Counties. The general Project area lies within the San Gorgonio Pass, flanked by the San Bernardino Mountains to the north, and the San Jacinto Mountains to the south. From a regional standpoint, Riverside and San Bernardino Counties contain a variety of geographical landforms and support numerous sensitive biological resources. The region is also characterized by highly urbanized, industrial, and agricultural areas and is currently subject to rapid urbanization in many areas.

Extensive riparian habitat associated with San Timoteo Creek is found in the Project area and the Union Pacific rail line is located parallel to much of this drainage. An area of complex topography known as “The Badlands” exists south of this riparian habitat, and the foothills of the San Bernardino Mountains comprise the northern portion of the Project area. The Norton Younglove Reserve is located near San Timoteo Creek and contains the proposed El Casco Substation site which is the western terminus of the proposed 115 kV subtransmission line alignment. The Project elements proposed at the eastern portion of the Project area traverse areas of intense development associated with the cities of Beaumont and Banning, interspersed with areas of agricultural and pastoral land uses. Chamise chaparral, coastal sage scrub, and ephemeral washes also cross the alignment.

Local Overview

Proposed El Casco Substation and Proposed Route. The western terminus of the proposed alignment and the site of the proposed El Casco Substation are located within the Norton Younglove Reserve. This area is characterized by rolling foothills dominated by non-native annual grasslands and disturbed/ruderal habitat in the valleys, transitioning to chamise chaparral and southern mixed chaparral at higher elevations. Southern riparian forest associated with San Timoteo Creek characterizes the eastern boundary of the Proposed Project in this area, and the federally and State endangered least Bell’s vireo and southwestern willow flycatcher have been detected here in recent surveys conducted in 2007. From the proposed substation location, the alignment angles away from the riparian habitat that parallels San Timoteo Road, and trends south and east over chamise and southern mixed chaparral hillsides. Some of the chaparral along this stretch was recently burned during the Woodhouse Fire, which consumed 6,442 acres in October, 2005 (RCFD 2007). San Timoteo Creek, which parallels both San Timoteo Canyon Road and an active rail road, is subject to a heightened noise regime from routine vehicle and rail traffic near the proposed substation site.

As the proposed alignment continues to trend to the south and east, it crosses State Route 60 (SR-60) at approximately milepost 2.2 and roughly parallels the highway on the east to milepost 4.0. This area is dominated by non-native annual grasslands flanked by dense, mature riparian forest on the northeast. Patches of Riversidian sage scrub and small populations of coast live oaks also occur. Least Bell’s vireo has also been detected here during surveys conducted in 2007.

The proposed alignment diverts from SR-60 towards the southeast near milepost 4.0. At this point, the alignment parallels San Timoteo Creek for approximately 1.2 miles. The riparian corridor here is dominated by mature cottonwood and willow trees. Further detections of least Bell’s vireo have been documented here during recent surveys. The creek appears to be heavily incised along stretches just west of milepost 4.0, possibly limiting new recruitment of native vegetation, although some areas support dense riparian communities immediately adjacent to the creek. An area of intense off-highway vehicle (OHV) use lies just north of the proposed alignment. This area has also recently undergone major brush clearing and grading activities associated with new development that were actively occurring in August, 2007. The alignment also traverses an existing poultry processing facility at this point. The area is generally characterized by southern riparian forest associated with San Timoteo Creek, but also consists of developed and disturbed/ruderal areas, associated with the poultry facility

and OHV use area, respectively. Scrub oak chaparral, southern willow scrub and non-native annual grassland communities also occur here. Much of the area west of the poultry facility has been denuded of native vegetation and fragmented, possibly due to active sheep grazing, which was observed during the 2007 surveys, and ongoing OHV use.

As the alignment continues in a southeast direction, the ROW traverses non-native grassland, scrub oak chaparral, disturbed/ruderal, and developed areas to approximately milepost 6.6. Large rural residential lots and developed areas occur scattered throughout the area. The majority of vegetation associated with these areas includes ornamental species, such as black locust trees (*Robinia pseudoacacia*), pepper trees (*Schinus molle*), various pines (*Pinus* spp.), and tree of heaven (*Alianthus* sp.). Several plant species common in disturbed areas also occur along roadways, including nightshade (*Solanum* sp.), yellow star thistle (*Centaurea solstitialis*), and various mustards (*Brassica* spp., *Hirschfeldia incana*, *Sisymbrium irio*). Along this section, the proposed alignment ties into the proposed Maraschino Loop at milepost 5.5 to the northwest and milepost 6.1 to the southeast. The Maraschino Loop alignment crosses areas primarily dominated by industrial development, including existing roadways and light industrial facilities.

The proposed alignment begins to trend east near milepost 6.7, approximately one-quarter mile west of California Avenue and parallels an existing access road. Throughout this area, non-native grasses are dominant and two dry, sandy washes bisect the proposed alignment. Large, open fields that appear to have been recently disked or grazed, along with rural residential lots and horse pastures also occur. Near milepost 8.7, just west of South Highland Springs Avenue, the proposed alignment crosses into ongoing development and runs parallel to a small creek that is subjected to current realignment and restoration efforts. The area just south of the creek is comprised of remanufactured slopes that show evidence of hydroseeding and stabilization activities.

Near milepost 8.9, the proposed alignment crosses into the Sun Lakes Community, an area characterized by residential development and open space, including single-family lots and a golf course. The great majority of the landscape here is comprised of manicured lawns and ornamental plant species. Man-made water features associated with the golf course also occur within this area.

The proposed alignment exits the Sun Lakes Community at approximately milepost 9.9. From this point, non-native annual grassland, disturbed habitat, and agricultural fields dominate the alignment area to approximately milepost 12.8. Rural residential lots are also scattered throughout the area. The conditions along this section of the proposed alignment provide potential habitat for burrowing owl. The flat landscape in this area is bisected by several ephemeral river washes. These washes consist of sandy bottoms and Riversidian alluvial sage scrub vegetation and provide potentially suitable habitat for Los Angeles pocket mouse.

At approximately milepost 13.2, the proposed alignment turns in a northern direction until it terminates at the existing Banning Substation. This portion of the alignment is characterized as developed as it is confined to existing roadways.

Zanja and Banning Substations. All Project activities related to upgrades at the Zanja and Banning Substations would be conducted within existing facilities.

The Banning Substation is located adjacent to Interstate 10 within the City of Banning. The area is comprised of developed and disturbed/ruderal habitats.

The Zanja Substation is located approximately 0.25 mile south of the intersection of Mill Creek Road and Bryant Street, north of Yucaipa. This substation is situated in a narrow valley bordered by the

foothills of the San Bernardino Mountains to the northeast and the Crafton Hills to the southwest. Mill Creek is located to the north, and Zanja Creek is adjacent to the substation to the south. The site is located just outside of a residential development in an area supporting light agricultural land use in the form of livestock pasture.

Proposed Fiber Optic Line. The proposed fiber optic line would be confined to existing ROWs, which include public roads and existing pole structures, between the Cities of Redlands and Banning. Areas traversed by the proposed fiber optic line are characterized as developed and include residential, commercial, and industrial lots.

Mill Creek Communication Site. SCE's existing Mill Creek Communications Site is located on 160 acres of SCE-owned property (i.e., private in-holding owned in fee since 1909) within the San Bernardino National Forest approximately two miles northeast of SCE's existing Zanja Substation. The site is approximately 2.2 miles northeast of the Zanja Substation on top of Yucaipa Ridge. The site is located at roughly 4,800 feet in elevation and supports southern mixed chaparral habitat. Developed areas in the form of a microwave relay building, an aqueduct-fed holding pond, and a dirt road also exist on the site. Portions of the site are disturbed and support non-native grasses and ruderal vegetation. A large, man-made holding pond comprises the northern border of the site. No activities at this site would disturb native vegetation communities.

D.4.1.3.1 Special Habitat Management Areas Overview

Western Riverside MSHCP

The Proposed Project lies within the MSHCP Area Plan boundaries. As indicated by the MSHCP (Volume I, Figure 2-6), the Proposed Project is located in the Riverside Lowlands Bioregion. Bioregions are defined as areas where species turnover and habitat zone transitions are pronounced in relation to changes in landform and other environmental features (RCIP, 2003 Volume 1 part 1 section 2.0 page 2-14). The Riverside Lowlands Bioregion generally occurs at elevations below 600 m (2,000 ft). Climate conditions in this area are relatively arid due to the rain shadow cast from the Santa Ana Mountains, which are situated approximately 25 miles southwest of the Proposed Project area.

On a more local scale, the County of Riverside General Plan divides the county into Area Plans. Area Plans incorporate a streamlined land use designation system that relates to the natural or economic characteristics of the land in Riverside County. As such, portions of the Proposed Project lie within the Pass Area Plan and the Reche Canyon/Badlands Area Plan.

Within the Area Plans, the Project has portions that lie inside and outside of Criteria Areas. Criteria Areas represent the area to which MSHCP Criteria will be applied and from which 153,000 acres of new conservation will be conveyed to contribute toward assembly of the overall MSHCP Conservation Area. These areas have been identified by the MSHCP as having potential conservation value for specific biological resources.

In order to guide assembly of Additional Reserve Lands, Criteria Areas have been divided into Criteria Cells. Criteria Cells allow evaluation and analysis of biological resources at a much finer scale. The Proposed Project consists of elements located in Criteria Cells 569, 572, 662, 753, 936, 1024, and 1032. Table D.4-1 provides a summary of the MSHCP conservation focus for the areas of the Proposed Project.

Table D.4-1. Summary of MSHCP Conservation Focus in the Project Area

Area Plan	Subunit	Criteria Cell	Conservation Focus
The Pass	SU-1 Potrero/ Badlands	936	Contribute to assembly of Proposed Core 3; focus on grassland, chaparral, and coastal sage scrub; areas conserved will be connected to uplands proposed for conservation in Cells 933 and 1030 to the west and south. Conservation will focus on the southwestern portion of the Cell.
		1024	Contribute to assembly of Proposed Core 3 and Proposed Constrained Linkage 22; focus on coastal sage scrub, chaparral, grassland, and Riversidian alluvial fan sage scrub; areas conserved within this Cell Group will be connected to uplands proposed for conservation in Cells 937 and 934 to the north and northeast. Conservation will focus on the western portion of Cell Group C.
		1032	Contribute to assembly of Proposed Core 3; focus on chaparral, coastal sage scrub, and grassland; areas conserved within Cell will be connected to uplands proposed for conservation in Cells 1030 and 1125 to the west and southeast, and to chaparral and coastal sage scrub habitat proposed for conservation in Cell Group A in the Reche Canyon/Badlands Area Plan to the south. Conservation within this Cell will focus on the southwestern portion of the Cell.
	Proposed Linkage 12	Proposed Linkage 12 is comprised of riparian habitats associated with San Timoteo Creek. Planning Species are San Bernardino Kangaroo Rat, Stephen's Kangaroo Rat, Los Angeles Pocket Mouse, Bobcat, Cooper's Hawk, White-tailed Kite, Loggerhead Shrike, Southwestern Willow Flycatcher, Least Bell's Vireo, Yellow Warbler, Yellow-breasted Chat, and Bell's Sage Sparrow. This Linkage likely provides for movement of common mammals such as Bobcat connecting to San Bernardino County and Core Areas in the Badlands. Maintenance of habitat quality and wetland functions and values of San Timoteo Creek are important for these species.	
	Proposed Constrained Linkage 22	Comprised of the portion of San Timoteo Creek extending west from I-10 to De Anza Cycle Park. Provides habitat for riparian-associated species and a connection to Core Areas in the Badlands. This Linkage is constrained by I-10 to the east, San Timoteo Canyon Road, and railroad tracks to the north, SR-60 to the south, and by existing agricultural land uses within the City of Beaumont. Planning Species for this Linkage include Least Bell's Vireo, Los Angeles Pocket Mouse, and Bobcat. In addition to maintenance of habitat quality, maintenance of floodplain processes along the San Timoteo Creek is important for this species. This Linkage likely provides for movement of common mammals such as Bobcat.	
Reche/Canyon Badlands	None	569	Contribute to assembly of Proposed Linkage 12; focus on riparian scrub, woodland, forest associated with San Timoteo Creek, and grassland; areas conserved within this Cell will be connected to uplands proposed for conservation to the east and north in Cells 572 and 480 and to riparian habitat proposed for conservation to the west in Cell 567. Conservation within this Cell will focus on the central portion of the Cell.
		572	Contribute to assembly of Proposed Linkage 12; focus on grassland; areas conserved within this Cell will be connected to uplands proposed for conservation to the south and west in Cells 662 and 569. Conservation within this Cell will focus on the southern portion of the Cell.
		662	Contribute to assembly of Proposed Linkage 12; focus on grassland and chaparral; areas conserved within this Cell will be connected to uplands proposed for conservation to the north and east in Cells 572 and 663. Conservation within this Cell will focus on the northeastern portion of the Cell.
		753	Contribute to assembly of Proposed Linkage 12 and Proposed Core 3; focus on grassland, coastal sage scrub, and woodlands and forest; areas conserved within this Cell will be connected to a variety of uplands proposed for conservation to the north in Cell 663. Conservation within this Cell will focus on the northeastern portion of the Cell.

Source: RCIP, 2003

In addition to analysis based on location of specific Criteria Areas and Criteria Cells, the MSHCP provides delineated survey areas for Covered Species under the plan. A Covered Species is one of 146 species within the MSHCP Plan Area that will be conserved by the MSHCP in perpetuity. Projects proposed within the survey areas for Covered Species require, at the minimum, a habitat evaluation. If it is determined that potential habitat is present in the Project area, subsequent focused surveys must be

conducted pursuant to accepted protocols. These Covered Species surveys, as they relate to the Proposed Project, are discussed in Section D.3.1.2, Survey Methodology, above.

The Pass Area Plan. The majority of the Proposed Project falls within the Pass Area Plan, including the proposed 115 kV subtransmission line alignment and Banning Substation. The Proposed Project crosses through Criteria Cell numbers 936, 1024, and 1032 in the Potrero/Badlands Subunit, which are located near San Timoteo Canyon Road. These Cells fall within the areas requiring focused surveys for narrow endemic plants, burrowing owl, Los Angeles pocket mouse, and San Bernardino kangaroo rat (in San Timoteo Creek). Portions of the Proposed Project cross Proposed Linkage 12 and Proposed Constrained Linkage 22, which are comprised of the riparian habitats associated with San Timoteo Creek. The Planning Species that are assumed to use Proposed Linkage 12 include yellow warbler (*Dendroica petechia brewsteri*), white-tailed kite (*Elanus leucurus*), yellow-breasted chat (*Icteria virens*), least Bell's vireo, and Los Angeles pocket mouse. This linkage is also assumed to allow movement of common mammals, such as the bobcat, and provides a connection to San Bernardino County and Core Areas in the Badlands. Proposed Constrained Linkage 22 provides habitat for many species, including least Bell's vireo and Los Angeles pocket mouse. This Linkage likely provides for movement of common mammals such as bobcat.

Reche Canyon/Badlands Area Plan. The portion of Proposed Project that falls within the Reche Canyon/Badlands Area Plan extends from the western boundary of the proposed El Casco Substation site in the Norton Younglove Reserve. The Project area does not fall within a specific subunit; however, it does cross into criteria cell numbers 569, 572, 662, and 753. These cells fall within the areas requiring focused surveys for narrow endemic plants, burrowing owl, Los Angeles pocket mouse, and San Bernardino kangaroo rat (in San Timoteo Creek).

D.4.1.3.2 Vegetation Communities and Wildlife

Vegetation Communities

The Proposed Project, including the 115 kV subtransmission line alignment, new and existing substation sites, and a 500 foot buffer traverses ten broadly categorized vegetation communities. Vegetation classifications were based on Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986) and include:

- Southern Mixed Chaparral
- Scrub Oak Chaparral
- Chamise Chaparral
- Riversidian Sage Scrub
- Riversidian Alluvial Fan Sage Scrub
- Southern Riparian Forest
- Southern Willow Scrub
- Non-native Annual Grassland
- Disturbed/Ruderal
- Developed

The vegetation communities identified in the Project area are shown in Figures D.4-1a to D.4-1e and are characterized based on Section C of the MSHCP Reference Document and/or Holland (1986). They are discussed in greater detail below.

Southern Mixed Chaparral. Southern mixed chaparral is characterized by a mix of evergreen chaparral shrubs such as chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos* spp.), and ceanothus (*Ceanothus* spp.). Little understory occurs except in openings in the shrub canopy. Southern mixed chaparral typically occurs on dry, rocky, often steep slopes with little soil. This community primarily occurs in patchy distribution along the western end of the proposed alignment near mileposts

Click here for Figure D.4-1a

Click here for Figure D.4-1b

Click here for Figure D.4-1c

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Click here for Figure D.4-1e

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0.6, 1.0, and 1.6 and west of milepost 5.0. Southern mixed chaparral is also present around the Mill Creek site and the access road leading up to the site. Current conditions at the site include highly disturbed vegetation maintained around the existing facility, likely as a fire break.

Scrub Oak Chaparral. Scrub oak chaparral is dominated by scrub oak (*Quercus berberidifolia*), with other chaparral shrubs such as manzanita, ceanothus, mountain mahogany (*Cercocarpus* spp.), and skunk brush (*Rhus trilobata*). It occurs on sites that are slightly more mesic than those of other chaparrals. Scrub oak chaparral in the Project area is dominated by these species with an understory of bedstraw (*Galium* sp.), sacapellote (*Acourtia microcephala*), and honeysuckle (*Lonicera subspicata*). This vegetation community is most common in the foothills surrounding the El Casco Substation Site and along the western portions of the proposed alignment.

Chamise Chaparral. Chamise chaparral is a chaparral type overwhelmingly dominated by chamise. Other species may be present but only as a minor part of total cover. This chaparral typically occurs on very dry slopes, and is the most common chaparral type in San Bernardino and Riverside Counties. Chamise chaparral occurs throughout the Project area, with a relatively large stand present just south of the proposed El Casco Substation Site.

Riversidian Sage Scrub. This habitat type is a xeric form of coastal sage scrub which is fairly open and dominated by coastal sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and non-native annual grasses. It typically occurs on dry sites such as steep slopes, severely drained soils, or clays that release water very slowly. Riversidian sage scrub in the Project area is dominated by California buckwheat with coastal sagebrush, native herbs such as sun cups (*Camissonia* sp.) and wreath-plant (*Stephanomeria* sp.), and non-natives such as summer mustard (*Hirschfeldia incana*) and brome grasses (*Bromus* spp.). Examples of this community occur along mileposts at several locations along the proposed alignment, primarily near the small washes and drainages that bisect the ROW.

Riversidian Alluvial Fan Sage Scrub. Riversidian alluvial fan sage scrub is a sensitive vegetation community (CNDDDB, 2007). It is characterized as a Mediterranean shrubland type that occurs in washes and on gently sloping alluvial fans. Alluvial scrub is made up predominantly of drought-deciduous soft-leaved shrubs, but with significant cover of larger perennial species typically found in chaparral (Kirkpatrick and Hutchinson, 1977). This vegetation type is distinctive because of the co-occurrence of evergreen shrubs, drought-deciduous shrubs, riparian species, and upland annual species in close proximity to one another (Hanes et al., 1989). The only dominant species that has a strong fidelity to alluvial scrub is scalebroom (*Lepidospartum squamatum*) (Smith, 1980). Scalebroom generally is regarded as an indicator of Riversidian alluvial scrub (Smith, 1980; Hanes et al., 1989). In addition to scalebroom, alluvial scrub typically is composed of white sage (*Salvia apiana*), redberry (*Rhamnus crocea*), California buckwheat, our Lord's candle (*Yucca whipplei*), California croton (*Croton californicus*), cholla (*Opuntia* spp.), tarragon (*Artemisia dracunculus*), yerba santa (*Eriodictyon* spp.), mule fat (*Baccharis salicifolia*), and mountain mahogany (Hanes et al., 1989; Smith, 1980). This vegetation community is associated with dry washes that cross the proposed alignment, including Smith Creek, Montgomery Creek, and several small tributaries.

Southern Riparian Forest. Southern riparian forest is characterized by a canopy of tall riparian trees such as willows (*Salix* spp.), cottonwoods (*Populus* spp.) and western sycamores (*Platanus racemosa*), and typically occurs along streams with permanent surface or subsurface water flow. Dominant tree species in southern riparian forest within the Project area include red willow (*Salix laevigata*), black willow (*S. gooddingii*), arroyo willow (*S. lasiolepis*), and western cottonwood (*P. fremontii*).

Understory species include young willows, mule fat, Douglas mugwort (*Artimisia douglasiana*), stinging nettle (*Urtica dioica*), and grape (*Vitis girdiana*). Southern riparian forest occurs along San Timoteo Creek in the area of the proposed El Casco Substation. This community also occurs along the proposed alignment between mileposts 1.8-2.8, and 3.6-5.7.

Southern Willow Scrub. Southern willow scrub is a dense, broadleaved, winter-deciduous riparian thicket dominated by willows with scattered western cottonwoods and western sycamores. Understory is typically limited by the thick canopy. This early seral vegetation type usually occurs on loose, sandy or fine gravelly alluvium along stream channels, and requires periodic flooding to prevent succession to riparian forest. Southern willow scrub is primarily distributed amongst larger areas of southern riparian scrub along San Timoteo Canyon, near the proposed El Casco Substation Site.

Non-native Annual Grassland. According to Holland (1986), non-native annual grassland is characterized by dense to sparse cover of annual grasses, often associated with native wildflowers, that grows from winter through spring and is essentially dead through summer and fall. It typically occurs on fine-textured soils that may be moist or even waterlogged during the rainy season but very dry during summer and fall, and is found in abandoned fields or in openings in scrub habitats. Dominant species include oats (*Avena* spp.), brome grasses, rye (*Lolium* spp.), fescues (*Vulpia* spp.) and broad-leaf non-natives such as filaree (*Erodium* spp.). Dominant species observed in non-native grassland on the Project site include ripgut grass (*Bromus diandrus*), foxtail chess (*B. madritensis*), and cheat grass (*B. tectorum*). Non-native grassland is scattered throughout the Project area but is most common in the central portions of the proposed alignment where large, agricultural fields dominate.

Disturbed/Ruderal. Disturbed/ruderal land occurs where the soil has been disturbed by agriculture or other activities, and native vegetation has been replaced by ruderal species. Disturbance has occurred to such a degree that this vegetation type is not characteristic of a native habitat type in disturbed condition. This cover type is common in vacant lots, fields disturbed by agricultural activity, and roadsides. It is differentiated from non-native grassland by the degree of cover of broad-leaf plant species. Typical disturbed/ruderal plant species found onsite during field surveys include the non-native species field bindweed (*Convolvulus arvensis*), filaree (*Erodium* spp.), fennel (*Foeniculum vulgare*), summer or short-pod mustard, prickly lettuce (*Lactuca serriola*), tree tobacco (*Nicotiana glauca*), and Russian thistle (*Salsola tragus*), with non-native grasses such as ripgut grass and foxtail chess. Disturbed/ruderal land is the most common vegetative cover type on the Project site, and occurs throughout the Project area.

Developed. Developed land occurs where development has replaced natural vegetation. It includes paved areas, buildings, and roads. Vegetation on developed land is limited to scattered ruderal non-native species such as Russian thistle, various mustards, horseweed (*Conyza canadensis*), and ornamental plantings.

Wildlife

Much of the Project area is currently subject to rapidly changing land use practices (i.e. transitioning from rural to residential and commercial), and large areas of previously continuous open space now consist of urban development. However, large open areas, riparian corridors, and pastureland still remain and support a diverse assemblage of both common and rare wildlife. The habitat types described above contribute to the diversity and abundance of wildlife in the area as they provide for permanent residency and breeding, and function as movement corridors for a number of wildlife species from the San Bernardino Mountains which are located north of the Project area.

Amphibians

Amphibians often require a source of standing or flowing water to complete their life cycle. However, some terrestrial species can survive in drier areas by remaining in moist environments found beneath leaf litter and fallen logs, or by burrowing into the soil. Only Pacific tree frog (*Hyla regilla*) was observed during surveys; however, portions of San Timoteo Creek likely support common species including California tree frogs (*Hyla cadaverina*) and western toad (*Bufo boreas*). Some of the ephemeral washes and adjacent upland areas could also support populations of spade foot toad (*Spea* [= *Scaphiopus*] *hammondii*).

Reptiles

A number of common reptile species were observed in the Proposed Project area including side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidenatilis*). Southern alligator lizard (*Elgaria multicarinata*) was detected within riparian habitat associated with San Timoteo Creek. Other common reptile species likely to occur in the riparian habitats within the Project area include ring-neck snake (*Diadophis punctatus*), striped racer (*Masticophis lateralis*), and California king snake (*Lampropeltris zonata*). Chaparral, sage scrub, and grassland communities in the Project area provide suitable habitat for common species such as western whiptail (*Aspidoscelis tigris*), gopher snake (*Pituophis melanoleucus*), and western rattlesnake (*Crotalus viridis*), which are known to occur in the region.

Birds

Bird species, including several special-status species, were identified by sight and sound during surveys and were the most common vertebrates observed in the Project area. Among the special-status species observed within riparian habitats in the Project area were least Bell's vireo, western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), yellow warbler, yellow-breasted chat, and southwestern willow flycatcher. Common species observed within these same habitats included Anna's hummingbird (*Calypte anna*), northern rough-winged swallow (*Stelgidopteryx serripennis*), house wren (*Troglodytes aedon*), spotted towhee (*Pipilo maculatus*), and house finch (*Carpodacus mexicanus*). Several common species were also detected utilizing chaparral, sage scrub, and grassland communities in the Project area, including bushtit (*Psaltriparus minimus*), western kingbird (*Tyrannus verticalis*), Bewick's wren (*Thryomanes bewickii*), and phainopepla (*Phainopepla nitens*). Additionally, many species commonly associated with human activity were observed along developed areas. These included American crow (*Corvus brachyrhynchos*), brown-headed cowbird (*Malothrus ater*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*).

Raptors are plentiful in the region, and suitable nesting and foraging habitat for raptor species occurs throughout the Project area. Several raptor species were observed during surveys. Red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), Cooper's hawk (*Accipiter cooperii*), and northern harrier (*Circus cyaneus*) were among several species of raptors detected foraging over open areas along the Project alignment. Additionally, red-tailed hawk nests were observed on subtransmission line towers in the vicinity of the proposed El Casco Substation site and within the fenced boundaries of the existing Zanja Substation.

Mammals

Several small mammals were detected during focused surveys for Los Angeles pocket mouse. These species were typically associated with sage scrub habitats occurring along Smith Creek, Montgomery Creek, and small unnamed washes that bisect the eastern portions of the proposed alignment. They

included Los Angeles pocket mouse, California pocket mouse (*Chaetodipus californicus*), agile kangaroo rat (*Dipodomys agilis*), house mouse (*Mus musculus*), and deer mouse (*Peromyscus maniculatus*). San Diego pocket mouse (*C. fallax*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), desert cottontail (*Sylvilagus audobonii*), raccoon (*Procyon lotor*), and black-tailed jackrabbit (*Lepus californicus*) were also observed within these habitats and grasslands in the Project area.

The Proposed Project area supports habitat for large-ranging mammal species and several were observed during surveys. These included coyote (*Canis latrans*), bobcat (*Lynx rufus*), gray fox (*Urocyon cinerargenteus*), and mule deer (*Odocoileus hemionus*). Typically, these species were observed along the eastern portions of the proposed alignment along areas of transition between valleys and the foothills that characterize the western boundary of the Coachella Valley.

Because of the close proximity to urban development, the area is also frequented by domestic animals and several species were observed, including house cats (*Felis catus*), domestic dogs (*Canis familiaris*), sheep (*Ovis spp.*), and cattle (*Bos taurus*).

D.4.1.3.3 Sensitive Vegetation Communities

The literature review determined that five sensitive vegetation communities are known to occur within the vicinity of the Proposed Project. Subsequent field surveys determined that three of these sensitive vegetation communities (Riversidean Alluvial Fan Sage Scrub, Southern Riparian Scrub, and Southern Willow Scrub) occur within the Proposed Project area. The three sensitive vegetation communities that were identified in the Proposed Project area are associated with drainages. The vegetation communities/habitats are listed in Table D.4-2.

Sensitive Vegetation Community/Habitats	Occurs in Survey Area	Location Description and Approximate MP (if found in survey area)
Southern Coast Live Oak Riparian Forest	No	NA
Southern Cottonwood Willow Riparian Forest	No	NA
Riversidean Alluvial Fan Sage Scrub	Yes	Adjacent to SR-60 (milepost 1.5-2.6); Smith Creek, Montgomery Creek, and unnamed washes (milepost 10.2, 11.5, 12.5-12.8)
Southern Riparian Scrub	Yes	Norton Younglove Reserve (El Casco Substation Site); San Timoteo Creek (milepost 1.5-2.2 & 3.9-5.6)
Southern Willow Scrub	Yes	Several small patches associated with San Timoteo Creek

Source: CNDDDB database search of El Casco, Beaumont, Cabazon, and Yucaipa 7.5 minute quads, 2007; SCE, 2007a
NA = Not Applicable

D.4.1.4.4 Sensitive Plant Species

Table D.4-3 lists federally and State listed plant species and species on List 1, 2, or 3 of the California Native Plant Society (CNPS) that may occur in or near the Proposed Project area. A record search using the California Natural Diversity Database (CNDDDB) and the CNPS Online Inventory was conducted for special-status plant species, and vegetation community surveys were conducted along the Project alignment. A total of 53 sensitive plant species were identified with the potential to occur in the Proposed Project area. Each of these species was assessed for its potential to occur within the Proposed Project area based on the following criteria:

- Present: Species was observed within the Project site at the time of the survey.

- **High:** Both a historical record exists of the species within the Project site or its immediate vicinity (approximately 5 miles) and the environmental conditions (including soil type) associated with species presence occur within the Project site.
- **Moderate:** Either a historical record exists of the species within the immediate vicinity of the Project site (approximately 5 miles) or the environmental conditions (including soil type) associated with species presence occur within the Project site.
- **Low:** No records exist of the species occurring within the Project site or its immediate vicinity (approximately 5 miles) and/or the environmental conditions (including soil type and elevation factors) associated with species presence are marginal within the Project site.
- **Unlikely:** Species was not observed during reconnaissance surveys conducted at an appropriate time for identification of the species and species is restricted to environmental conditions (including soil and elevation factors) that do not occur within the Project site.

The CNDDDB and CNPS literature search identified 15 plant species that are known to occur within the vicinity of the Proposed Project and that have a moderate to high potential to occur within the survey area. Two sensitive plant species were detected within the Proposed Project area during rare plant surveys conducted by URS in 2005 and Jones and Stokes in 2007. These include smooth tarplant (URS, 2005, Jones & Stokes, 2007) and Cleveland's bush monkey flower (URS, 2005). Thirty-six of the sensitive plant species were determined to have little or no potential to occur on site due to lack of suitable environmental conditions. For this reason, these species are not discussed further in this document. Table D.4-3 summarizes the sensitive plant species known to occur within the Project vicinity and their potential for occurrence within the proposed alignment. A detailed account of the species with a moderate or high potential to occur is included in the subsequent paragraphs.

Scientific Name	Common Name	Status	Potential for Occurrence	Blooming Period	Known and Potential Occurrence and Elevational Limits
<i>Abronia villosa var. aurita</i>	Chaparral sand-verbena	1B.1	Moderate	Jan-Sep	Chaparral, coastal scrub, desert dunes (sandy); 80-1600 m (262-5249 ft)
<i>Allium marvinii</i>	Yucaipa onion	1B.1, MSHCP, NEPS	Moderate	Apr-May	Chaparral (clay openings); 760-1065 m (2493-3494 ft); not detected during 2007 focused surveys (Jones & Stokes 2007)
<i>Allium munzii</i>	Munz's onion	FE, SE, 1B.1, MSHCP, NEPS	Low	Mar-May	Chaparral, cismontane woodland, coastal scrub, grasslands; 300-1070 m (984-3510 ft)
<i>Arenaria paludicola</i>	Marsh sandwort	FE, SE, 1B.1	Unlikely	May-Aug	Bogs and fens, marshes and swamps / sandy, openings; 3-170 m (9-558 ft)
<i>Astragalus pachypus var. jaegeri</i>	Jaeger's milk-vetch	1B.1, MSHCP	High	Dec-Jun	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland (sandy or rocky); 365-915 m (1197-3002 ft)
<i>Astragalus lentiginosus var. coachellae</i>	Coachella Valley milk-vetch	FE, 1B.2	Unlikely	Feb-May	Sonoran desert scrub; 40-655 m (131-2149 ft)
<i>Astragalus tricarinatus</i>	Triple-ribbed milk-vetch	FE, 1B.2	Unlikely	Feb-May	Joshua tree woodland, Sonoran desert scrub (sandy or gravelly); 450-1190 m (1476-3904 ft)
<i>Atriplex coronata var. notatior</i>	San Jacinto Valley crownscale	FE, 1B.1, MSHCP	Unlikely	Apr-Aug	Playas, valley and foothill grassland, vernal pools (alkaline); 139-500 m (456-1640 ft)
<i>Atriplex parishii</i>	Parish's brittlescale	1B.1, MSHCP	Unlikely	Jun-Oct	Chenopod scrub, playas, vernal pools; 25-1900 m (82-6233 ft)
<i>Berberis nevinii</i>	Nevin's barberry	FE, SE, 1B.1, MSHCP	Moderate	Mar-Apr	Chaparral, cismontane woodland, coastal scrub, riparian scrub / sandy or gravelly); 295-825 m (970-2706 ft)

Table D.4-3 Endangered, Threatened, and Sensitive Plant Species with the Potential to Occur in the Vicinity of the Proposed Project

Scientific Name	Common Name	Status	Potential for Occurrence	Blooming Period	Known and Potential Occurrence and Elevational Limits
<i>Brodiaea filifolia</i>	Thread-leaved brodiaea	1B.1,MSHCP	Unlikely	Mar-Jun	Chaparral openings, cismontane woodland, coastal scrub, playas, valley and foothill grasslands, and vernal pools/often clay; 40-1220 m (131-4003 ft)
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Palmer's mariposa lily	1B.2	Unlikely	May-Jul	Chaparral, lower montane coniferous forest, mesic meadows and seeps; 1000-2390 m (3280-7840 ft)
<i>Calochortus plummerae</i>	Plummer's mariposa lily	1B.2, MSHCP	High	May-Jul	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grasslands (granitic, rocky); 100-1700 m (328-5577 ft). Known to occur in the ROW for the northern alternative. Documented in Mill Creek Canyon along Highway 38 approximately one mile north of Mill Creek site. Could occur along Mill Creek access road.
<i>Carex comosa</i>	Bristly sedge	2.1	Unlikely	May-Sep	Coastal prairie, marshes and swamps (lake margins), valley and foothill grassland; 0-625 m (0-2050 ft)
<i>Centromadia pungens</i> ssp. <i>laevis</i>	Smooth tarplant	1B.1,MSHCP	Present	Apr-Sep	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland (alkaline); 0-480 m (0-1574 ft); detected on alluvial deposits of San Timoteo Creek adjacent to proposed access road, El Casco Substation site, and western end of proposed alignment.
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	3.2, MSHCP	Moderate	Apr-Jun	Chaparral, coastal scrub (sandy or rocky openings); 40-1705 m (131-5594 ft). Documented along mouth of Mill Creek approximately 1.3 miles west of Mill Creek site.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Long-spined spineflower	1B.2	Low	Apr-Jul	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland (often clay); 30-1530 m (98-5020 ft)
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	White-bracted spineflower	1B.2	Low	Apr-Jun	Mojavean desert scrub, pinyon and juniper woodland; 300-1200 m (984-3937 ft)
<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	Salt marsh bird's-beak	FE, SE, 1B.2	Unlikely	May-Oct	Coastal dunes, marshes and swamps; 0-30 m (0-98 ft)
<i>Deinandra mohavensis</i>	Mojave tarplant	SE, 1B.3, MSHCP	Moderate	Jul-Oct (Jan)	Chaparral, coastal scrub, riparian scrub (mesic); 640-1600 m (2100-5249 ft)
<i>Dodecahema leptoceras</i>	Slender-horned spineflower	FE, SE, 1B.1, MSHCP, NEPS	Moderate	Apr-Jun	Chaparral, cismontane woodland, coastal scrub (alluvial fan) / sandy; 200-760 m (660-2493 ft)
<i>Dudleya multicaulis</i>	Many-stemmed dudleya	1B.2, MSHCP, NEPS	Moderate	Apr-Jul	Chaparral, coastal scrub, valley and foothill grassland / often clay; 15-790 m (49-2590 ft); not detected during 2007 surveys (Jones & Stokes 2007)
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Santa Ana River woollystar	FE, SE, 1B.1, MSHCP	Moderate	May-Sep	Chaparral, coastal scrub (alluvial fan) / sandy or gravelly; 91-610 m (298-2001 ft)
<i>Erodium macrophyllum</i>	Round-leaved filaree	2.2	Moderate	March-May	Cismontane woodlands, valley and foothill grasslands on clay-like soils. 15-1200 m
<i>Euphorbia misera</i>	Cliff spurge	2.2	Unlikely	Dec-Aug	Coastal bluff scrub, coastal scrub, Mojavean desert scrub (rocky); 10-500 m (33-1640 ft)
<i>Fimbristylis thermalis</i>	Hot springs fimbristylis	2.2	Unlikely	Jul-Sep	Meadows and seeps (alkaline, near hot springs); 110-1340 m (361-4396 ft)

Table D.4-3 Endangered, Threatened, and Sensitive Plant Species with the Potential to Occur in the Vicinity of the Proposed Project

Scientific Name	Common Name	Status	Potential for Occurrence	Blooming Period	Known and Potential Occurrence and Elevational Limits
<i>Galium californicum ssp. primum</i>	California bedstraw	1B.2, MSHCP	Low	May-Jul	Chaparral, lower montane coniferous forests; shady areas; 1350-1700 m (4429-5577 ft)
<i>Imperata brevifolia</i>	California satintail	2.1	Unlikely	Sep-May	Chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), riparian scrub (mesic); 0-500 m (0-1640 ft)
<i>Helianthus nuttallii ssp. parishii</i>	Los Angeles sunflower	1A	Unlikely	Aug-Oct	Marshes and swamps (coastal salt and freshwater); 10-1675 m (33-5495 ft)
<i>Heuchera parishii</i>	Parish's alumroot	1B.3	Unlikely	Jun-Aug	Lower montane coniferous forests, subalpine coniferous forests, alpine boulder and rock fields; documented along Mill Creek approximately one mile north of Mill Creek site.
<i>Horkelia cuneata ssp. puberula</i>	Mesa horkelia	1B.1	Low	Feb-Jul (Sep)	Chaparral, cismontane woodland, coastal scrub (sandy or gravelly); 70-810 m (230-2657 ft)
<i>Lasthenia glabrata ssp. coulteri</i>	Coulter's goldfields	1B.1, MSHCP	Unlikely	Feb-Jun	Marshes and swamps, playas, vernal pools; up to 1220 m (4003 ft)
<i>Lepidium virginicum var. robinsonii</i>	Robinson's pepper-grass	1B.2	Low	Jan-Jul	Chaparral, coastal scrub; up to 885 m (2903 ft)
<i>Lilium parryi</i>	Lemon lily	1B.2, MSHCP	Unlikely	Jul-Aug	Lower montane coniferous forests, meadows and seeps, riparian forests; 1220-2745 m (4002-9005 ft)
<i>Linanthus maculatus</i>	Little San Bernardino Mountains linanthus	1B.2	Unlikely	May-May	Desert dunes, Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub; 195-2075 m (638-6808 ft)
<i>Lycium parishii</i>	Parish's desert-thorn	2.3	Unlikely	Mar-Apr	Coastal scrub, Sonoran desert scrub; 305-1000 m (1001-3281 ft)
<i>Malacothamnus parishii</i>	Parish's bush mallow	1A	Unlikely	Jun-Jul	Chaparral, coastal scrub; 305-455 m (1001-1493 ft)
<i>Mimulus clevelandii</i>	Cleveland's bush monkey flower	4.2, MSHCP	Present	Apr-Jul	Chaparral, lower montane coniferous forest (often in disturbed areas, openings, rocky); 815-2000 m (2,674-6,562 ft); detected on steep erosive slopes in Norton Younglove Reserve adjacent to proposed El Casco Substation site.
<i>Monardella macrantha ssp. hallii</i>	Hall's monardella	1B.3, MSHCP	High	Jun-Aug	Broadleaved upland forests, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland; 730-2195 m (2395-7200 ft). Documented on south side of Mill Creek Canyon near Mountain Home Village, approximately 0.75 mile north of Mill Creek site.
<i>Muhlenbergia californica</i>	California muhly	4.3, MSHCP	Moderate	Jun-Sep	Chaparral, coastal scrub; stream banks, canyons, moist ditches; 100-2000 m (328-6561 ft)
<i>Nama stenocarpum</i>	Mud nama	2.2, MSHCP	Moderate	Jan-Jul	Marshes and swamps (lake margins, riverbanks); 5-500 m (16-1640 ft)
<i>Navarretia fossalis</i>	Spreading navarretia	FT, 1B.1, MSHCP, NEPS	Unlikely	Apr-Jun	Chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools; 30-1300 m (98-4265 ft)
<i>Phacelia stellaris</i>	Brand's phacelia	1B.1, MSHCP, NEPS	Low	Mar-Jun	Coastal scrub, dunes; restricted to sandy benches along Santa Ana River in Riverside County (RCIP, 2003); up to 400 m (1312 ft)
<i>Ribes divaricatum var. parishii</i>	Parish's gooseberry	1A	Unlikely	Feb-Apr	Riparian woodland; 65-300 m (213-984 ft)

Table D.4-3 Endangered, Threatened, and Sensitive Plant Species with the Potential to Occur in the Vicinity of the Proposed Project

Scientific Name	Common Name	Status	Potential for Occurrence	Blooming Period	Known and Potential Occurrence and Elevational Limits
<i>Schoenus nigricans</i>	Black sedge	2.2	Unlikely	Aug-Sep	Marshes and swamps (often alkaline); 150-2000 m (492-6561 ft)
<i>Selaginella eremophila</i>	Desert spike-moss	2.2	Unlikely	(May) Jun (Jul)	Sonoran desert scrub; 200-900 m (656-2952 ft)
<i>Senecio aphanactis</i>	Rayless ragwort	2.2	Unlikely	Jan-Apr	Chaparral, cismontane woodland, coastal scrub (sometimes alkaline); 15-1800 m (49-5905 ft)
<i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	Parish's checkerbloom	FC, SR, 1B.2	Low	Jun-Aug	Chaparral, cismontane woodland, lower montane coniferous forest; 1000-2135 m (3280-7004 ft)
<i>Sidalcea neomexicana</i>	Salt spring checkerbloom	2.2	Low	Mar-Jun	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas (alkaline, mesic); 15-1530 m (49-5020 ft)
<i>Streptanthus campestris</i>	Southern jewel-flower	1B.3	Unlikely	May-Jul	Chaparral, lower montane coniferous forest, pinyon and juniper woodland (rocky); 900-2300 m (2953-7545 ft)
<i>Symphyotrichum defoliatum</i>	San Bernardino aster	1B.2	Moderate	Jul-Nov	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic) / near ditches, streams, springs; 2-2040 m (6-6693 ft)
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Sonoran maiden fern	2.2	Unlikely	Jan-Sep	Meadows and seeps (seeps and streams); 50-610 m (164-2001 ft)
<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Wright's trichocoronis	2.1, MSHCP, NEPS	Low	May-Sep	Meadows and seeps, marshes and swamps, riparian forest, vernal pools / alkaline; 5-435 m (16-1427 ft)

FE – Federally listed Endangered
 FT – Federally listed Threatened
 SR – California Rare
 SE – California-listed Endangered
 ST – California-listed Threatened
 MSHCP – Species covered under the MSHCP
 NEPS – Narrow Endemic Plant Species

CNPS 1B – Rare or endangered in California and elsewhere
 CNPS 2 – Rare or endangered in California, more common elsewhere
 CNPS 3 – More information needed (Review List)
 CNPS 4 – Limited Distribution (Watch List)
 0.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
 0.2 = Fairly endangered in California (20-80% occurrences threatened)
 0.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

Species Accounts

Chaparral sand-verbena (*Abronia villosa* var. *aurita*). Chaparral sand-verbena is a CNPS List 1B.1 annual herb occurring in chaparral, coastal scrub, and sandy dune areas at elevations ranging from 80 - 1600 meters (262 - 5249 feet) above mean sea level (amsl). Chaparral and coastal scrub communities occur throughout the Project area and the species has been documented in the San Jacinto foothills, approximately six miles south of the Proposed Project. Therefore, there is a moderate potential for the occurrence of this species.

Marvin's onion (*Allium marvinii*). Marvin's onion is an MSHCP Narrow Endemic Plant Species (NEPS), an MSHCP Covered Species, and a CNPS List 1B.1 bulbiferous herb occurring in clay soils in chaparral at elevations ranging from 760 - 1065 m (2493-3494 ft) amsl. Currently, the species is known from only two occurrences in the Yucaipa and Beaumont region of the southern San Bernardino Mountains in San Bernardino County and western Riverside County (CNPS, 2007). Marvin's onion

was not detected during surveys conducted in 2007; however, chaparral occurs in several areas along the proposed alignment. Therefore, there is a moderate potential for the occurrence of this species.

Jaeger's milk-vetch (*Astragalus pachypus* var. *jaegerii*). Jaeger's milk-vetch is an MSHCP Covered Species and CNPS List 1B.1 perennial herb occurring in sandy or rocky openings in chaparral, woodlands, scrub, and grassland habitats at elevations ranging from 365-915 m (1197-3002 ft). The species has been documented in chamise chaparral in a canyon west of Potrero Creek, approximately two miles south of the proposed alignment (CNDDDB, 2007). Similar habitat occurs in the Project area; therefore, there is a high potential for the occurrence of this species.

Nevin's barberry (*Berberis nevinii*). Nevin's barberry is a federal and State Endangered Species, an MSHCP Covered Species and a CNPS List 1B.1 evergreen shrub occurring in coarse soils and rocky slopes in chaparral, cismontane woodland, coastal scrub, and gravelly wash margins in alluvial scrub at elevations ranging from 295 – 895 meters (970 – 2,940 feet) amsl. The closest documented occurrence of this species is in San Timoteo Canyon, approximately 7.5 miles northwest of the proposed El Casco Substation; however, conditions conducive to the occurrence of this species exist within the Project area. Therefore, there is a moderate potential for the occurrence of this species.

Plummer's mariposa lily (*Calochortus plummerae*). Plummer's mariposa lily is a CNPS List 1B.2 bulbiferous herb occurring in rocky and sandy sites, typically of alluvial or granitic material, in coastal scrub, chaparral, cismontane woodland, lower montane coniferous forest and valley and foothill grasslands at elevations ranging from 90 – 1,610 meters (300 – 5,280 feet) amsl. Both chaparral and coastal scrub vegetation communities occur within the survey area and this species was detected during surveys conducted in 2005 within five miles of the Proposed Project alignment; therefore, there is a high probability of occurrence of this species.

Smooth tarplant (*Centromadia pungens* ssp. *laevis*). Smooth tarplant is an MSHCP Covered Species and a CNPS List 1B.1 annual herb occurring in chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland (alkaline) at elevations ranging up to 480 m (1574 ft) amsl. This species was detected during surveys conducted in 2005 along alluvial deposits of San Timoteo Creek at the west end of the Project area (SCE, 2007a). Riparian woodland associated with San Timoteo Creek occurs near the proposed El Casco Substation site and along the western portions of the proposed alignment; therefore, there is a high potential for the occurrence of this species.

Parry's spineflower (*Chorizanthe parryi* var. *parryi*). Parry's spineflower is an MSHCP Covered Species and a CNPS List 3.2 annual herb occurring in chaparral and coastal scrub (sandy or rocky openings) at elevations ranging from 40 – 1,705 meters (130-5,590 feet) amsl. Chaparral and coastal scrub communities occur along several sections of the Proposed Project area; therefore, there is a moderate potential for the occurrence of this species.

Mojave tarplant (*Deinandra mohavensis*). Mojave tarplant is a State Endangered, CNPS List 1B.3 annual herb occurring in chaparral, coastal scrub, and mesic riparian scrub at elevations ranging from 640 – 1,600 meters (1,115 – 5,250 feet) amsl. These three communities occur along several sections of the Proposed Project area; therefore, there is a moderate potential for the occurrence of this species.

Slender-horned spineflower (*Dodecahema leptoceras*). Slender-horned spineflower is a federally and state endangered, MSHCP NEPS, MSHCP Covered Species, CNPS List 1B.1 annual herb found in sandy soil in association with mature alluvial scrub at elevations ranging from 200 – 700 meters (660 – 2,300 feet) amsl. Prigge, et al. (1993) found that the ideal habitat appears to be a terrace or bench that receives overbank deposits every 50 to 100 years. While only marginal habitat exists along Smith Creek, Montgomery Creek, and various ephemeral drainages that cross the Project area, the species has

been recorded within 5 miles of the proposed alignment. Therefore, there is a moderate potential for the occurrence of this species.

Many-stemmed dudleya (*Dudleya multicaulis*). Many-stemmed dudleya is an MSHCP NEPS, MSHCP Covered Species, CNPS List 1B.2 perennial herb occurring in chaparral, coastal scrub, and valley and foothill grasslands at elevations ranging up to 790 meters (2,590 feet) amsl. All of these communities occur along the proposed alignment; therefore, there is a moderate potential for the occurrence of this species.

Round-leaved filaree (*Erodium macrophyllum*). Round-leaved filaree is a CNPS List 2.2 annual herb occurring in open valley and foothill grasslands on friable clay soils at elevations up to 1200 meters (3937 feet) amsl. Suitable habitat occurs along several sections of the proposed alignment; therefore, there is a moderate potential for the occurrence of this species.

Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*). Santa Ana River woollystar is a federally and State Endangered, MSHCP Covered Species, CNPS List 1B.1 perennial herb occurring in sandy or gravelly areas in chaparral and alluvial scrub at elevations ranging from 91-610 m (298-2001 ft) amsl. Suitable habitat occurs along several sections of the proposed alignment; therefore, there is a moderate potential for the occurrence of this species.

Cleveland's bush monkeyflower (*Mimulus clevelandii*). Cleveland's bush monkeyflower is an MSHCP Covered Species, CNPS List 4.2 rhizomatous herb typically occurring in disturbed areas or rocky openings in chaparral and lower montane coniferous forests at elevations ranging from 815-2000 m (2,674-6,562 ft) amsl. This species was detected during surveys conducted in 2005 within the Norton Younglove Reserve at the west end of the Project area (SCE, 2007a). Disturbed areas and chaparral occur throughout the Project area; therefore, there is a high potential for the occurrence of this species.

Hall's monardella (*Monardella macrantha* ssp. *hallii*). Hall's monardella is a CNPS List 1B.3 rhizomatous herb occurring in broadleaved upland forests, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland at elevations ranging from 730 – 2,195 meters (2,400 – 7,200 feet) amsl. This species has been documented less than two miles from the Mill Creek Project site. Additionally, conditions conducive to the occurrence of Hall's monardella occur in several areas throughout the Project area. Therefore, there is a high potential for the occurrence of this species.

California muhly (*Muhlenbergia californica*). California muhly is an MSHCP Covered Species, CNPS List 4.3 rhizomatous herb occurring in stream banks, canyons, and moist ditches in chaparral and coastal scrub at elevations ranging from 100-2000 m amsl. Chaparral and coastal scrub occur along several sections of the Proposed Project; therefore, there is a moderate potential for the occurrence of this species.

Mud nama (*Nama stenocarpum*). Mud nama is an MSHCP Covered Species, CNPS List 2.2 annual/perennial herb occurring in intermittently wet areas along lake margins and river banks at elevations ranging from 5-500 m (16-1640 ft) amsl. Suitable habitat occurs along the banks of San Timoteo Creek; therefore, there is a moderate potential for the occurrence of this species.

San Bernardino aster (*Symphotrichum defoliatum*). San Bernardino aster is a CNPS List 1B.2 perennial rhizomatous herb occurring in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and vernal mesic valley and foothill grasslands at elevations ranging from 2-2,040 meters (7-6,690 feet) amsl. Coastal scrub and grassland communities

occur along several section of the proposed alignment; therefore, there is a moderate potential for the occurrence of this species.

D.4.1.3.5 Sensitive Wildlife Species

Special-status species include those listed as threatened or endangered under the federal or California Endangered Species Acts, species proposed for listing, species of special concern, and other species which have been identified by the USFWS, CDFG, or local jurisdictions as unique or rare and which have the potential to occur within the study area. There are currently 69 sensitive wildlife species (Table D.4-4) that either occur or have the potential to occur within the general Project area. Each of these species was assessed for its potential to occur based on the following criteria:

- **Present:** Species was observed on site or in the same watershed (aquatic species only) during a site visit or recent focused survey, or population has been acknowledged by CDFG, USFWS, or Forest Service.
- **High:** Habitat (including soils) for the species occurs on site and a known occurrence occurs within 5 miles of the site within the past 20 years.
- **Moderate:** Habitat (including soils) for the species occurs on site and a known occurrence occurs within the database search, but not within 5 miles of the site or within the past 20 years; or a known occurrence occurs within 5 miles of the site and within the past 20 years and marginal or limited amounts of habitat occurs on site; or the species' range includes the geographic area and suitable habitat exists.
- **Low:** Limited habitat for the species occurs on site and no known occurrences were found within the database search and the species' range includes the geographic area.
- **Unlikely:** Habitat requirements strongly associated with the species (including vegetation and soils) do not occur within the survey area or the known range of the species does not include the survey area.

Twenty-one sensitive wildlife species (including MSHCP Covered Species) were observed in the Proposed Project area during surveys conducted in 2005, 2006, and 2007. These included coast horned lizard, Cooper's hawk, golden eagle, northern harrier, western yellow-billed cuckoo, yellow warbler, white-tailed kite, willow flycatcher (two subspecies), California horned lark, merlin, prairie falcon, peregrine falcon, yellow-breasted chat, loggerhead shrike, least Bell's vireo, coyote, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, bobcat, and Los Angeles pocket mouse. See Figures D.4-2a to D.4-2e for the locations of the sensitive species identified as present in the Project area. Reconnaissance seining indicated potential habitat for one sensitive fish species, although none were detected. Twenty-nine wildlife species were determined to have little or no potential to occur due to lack of suitable environmental conditions in the Proposed Project area.

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
INVERTEBRATES				
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	FT, MSHCP	Unlikely	Restricted to seasonal, cool-water, vernal pools with low to moderate dissolved solids; no suitable habitat in Project area. Vernal pools not detected in Project area (Jones and Stokes, 2007).
<i>Euphydryas editha quino</i>	Quino checkerspot	FE, MSHCP	Moderate	Open canopied habitats in sage scrub, chaparral, grasslands; strongly associated with host plants; suitable habitat consisting of host plants is present in Project area.
<i>Rhaphiomidas terminatus abdominalis</i>	Delhi Sands flower-loving fly	FE, MSHCP	Unlikely	Occurs in fine, Delhi series sands in San Bernardino and Riverside Counties; no suitable habitat in Project area.

Table D.4-4. Known and Potential Occurrence of Sensitive Wildlife Species Within and Adjacent to Proposed Project

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE, MSHCP	Unlikely	Restricted to deep, seasonal, long-lived vernal pools, vernal pool-like ephemeral ponds, stock ponds; prefer warm water with low to moderate dissolved solids; no suitable habitat in Project area. Vernal pools not detected in Project area (Jones and Stokes, 2007).
AMPHIBIANS				
<i>Ensatina klauberi</i>	Large-blotched salamander	CSC	Low	Appear to be generalists (Jennings and Hayes, 1994); variety of conifer and chaparral habitats, coastal dunes, coastal sage scrub, chaparral, oak woodland; project borders western margins of known range; last known occurrence in 1995 near Idyllwild (CNDDDB, 2007).
<i>Rana aurora draytonii</i>	California red-legged frog	FT, CSC, MSHCP	Unlikely	Dense, shrubby riparian vegetation associated with deep, still or slow-moving water; only one extant population known from Santa Rosa Plateau Ecological Reserve in Riverside County.
<i>Rana muscosa</i>	Mountain yellow-legged frog	FE, FSC, CSC, MSHCP	Unlikely	Occurs in ponds, dams, lakes, and streams at moderate to high elevations containing sufficient supplies of water; restricted to small tributaries of the upper reaches of the San Jacinto River in Project area. Documented in Mill Creek along Highway 38 approximately one mile north of Mill Creek site.
<i>Spea (=Scaphiopus) hammondi</i>	Western spadefoot	CSC, MSHCP	High	Temporary rain pools that last at least three weeks; documented in 2005 in ephemeral drainage just west of Sunset Avenue approximately 0.05 mile from proposed route (CNDDDB, 2007).
FISH				
<i>Catostomus santaanae</i>	Santa Ana sucker	FT, CSC, MSHCP	Low	Sand, rubble, or boulder-bottomed streams; portions of San Timoteo Creek may provide suitable breeding habitat (RCIP, 2003); however, not detected during reconnaissance seining along portions of creek in Project area.
<i>Gila orcutti</i>	Arroyo chub	CSC, MSHCP	Unlikely	Slow water sections of south coastal streams with mud or sand bottoms; suitable habitat does not occur in Project area.
<i>Rhinichthys osculus</i> ssp.	Santa Ana speckled dace	CSC	Unlikely	Requires cool shallow permanent flowing streams, with cobble and gravel bottom riffles; suitable habitat does not occur in Project area.
REPTILES				
<i>Anniella pulchra pulchra</i>	Silvery (=California) legless lizard	CSC	High	Sandy or loose loamy soils under sparse vegetation of beaches, chaparral, or pine-oak woodland; or sycamores, cottonwoods, or oaks that grow on stream terraces; also in desert scrub at the western edge of the Mojave Desert. Often found under or near surface objects such as logs, rocks, old boards, woodrat nests; potential habitat occurs along much of the proposed alignment.
<i>Aspidoscelis hyperythra</i>	Orange-throated whiptail	CSC, MSHCP	High	Low-elevation coastal scrub, chaparral, and valley-foothill hardwood; prefers washes and other sandy areas with patches of brush and rocks; feeds primarily on termites; suitable habitat occurs within chaparral-covered hills throughout Project area.
<i>Charina bottae umbratica</i>	Southern rubber boa	ST, MSHCP	Unlikely	Occurs in conifer forests near streams and meadows; known to occur in the Transverse Range, San Bernardino, San Gabriel and San Jacinto Mountains; suitable habitat does not occur in the Project area.
<i>Crotalus ruber ruber</i>	Northern red-diamond rattlesnake	CSC, MSHCP	Low	Found in a number of vegetative associations, and more frequently in habitats with heavy brush and large rocks or boulders; limited habitat present throughout Project area.
<i>Emys (=Clemmys) marmorata pallida</i>	Southwestern pond turtle	CSC, MSHCP	Unlikely	Deep pools in rivers and streams below 6000 feet amsl with adequate basking sites; no suitable habitat in Project area.
<i>Gambelia wislizenii</i>	Long-nosed leopard lizard	CSC	Low	Bunch grass, alkali bush, sagebrush, and other low plant associations; historic occurrences near Banning and Cabazon (RCIP, 2003); limited habitat in Project area.

Table D.4-4. Known and Potential Occurrence of Sensitive Wildlife Species Within and Adjacent to Proposed Project

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
<i>Lampropeltis zonata parvirubra</i>	San Bernardino mountain kingsnake	CSC, MSHCP	Moderate	Canyons with rocky outcrops or rocky talus slopes in conifer forest or chaparral habitats; well-lit canyons with rocky outcrops; known to occur near Mill Creek site (CNDDDB, 2007).
<i>Phrynosoma coronatum blainvillei</i>	Coast (San Diego) horned lizard	CSC, MSHCP	Present	Coastal sage, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest with loose, fine soils with a high sand fraction; an abundance of native ants or other insects; open areas with limited overstory for basking; and low but relatively dense shrubs for refuge; suitable habitat occurs throughout Project area; detected adjacent to riparian habitat near milepost 1.6.
<i>Salvadora hexalepis virgulata</i>	Coast patch-nosed snake	CSC	Moderate	Broad generalist; suitable habitat along entire proposed route, however, no known occurrences in Project area.
<i>Thamnophis hammondi</i>	Two-striped garter snake	CSC	High	Permanent streams, intermittent creeks, vernal pools; suitable habitat occurs along San Timoteo Creek, adjacent to proposed substation and portions of proposed route. Documented near Thurman Flats Picnic Area approximately one mile north of Mill Creek site.
<i>Uma inornata</i>	Coachella Valley fringe-toed lizard	FT, SE	Unlikely	Areas of fine, windblown sand deposits in the sandy plains, sand hummocks, and mesquite dunes of the Coachella Valley, Riverside County; no suitable habitat present in Project area.
<i>Xantusia henshawi henshawi</i>	Granite night lizard	CSC, MSHCP	Unlikely	Restricted to narrow microenvironment; rocky outcrops, flaked granite; no suitable habitat occurs in Project area.
BIRDS				
<i>Accipiter cooperii</i>	Cooper's hawk	CSC, MSHCP	Present	Nests in woodlands, especially riparian growths and residential areas; detected foraging over proposed El Casco Substation site.
<i>Accipiter striatus</i>	Sharp-shinned hawk	CSC, MSHCP	High	Winters in project region; variety of woodlands with high canopy and proximity to open areas; suitable foraging habitat occurs within open grasslands and agricultural fields along proposed alignment.
<i>Agelaius tricolor</i>	Tricolored blackbird	CSC, MSHCP	Low	Freshwater marshes, uplands, and agricultural fields; closest known occurrences at Fisherman's Retreat near proposed substation and San Jacinto Wildlife Area in 1986 and 1997, respectively (CNDDDB, 2007).
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	CSC, MSHCP	High	Open scrub habitats and brushy slopes with grassy patches; potential habitat occurs along chamise chaparral covered hills at western end of Project area.
<i>Amphispiza belli belli</i>	Bell's sage sparrow	CSC, MSHCP	High	Coastal sage scrub and chaparral; suitable habitat occurs along chaparral-dominated slopes at western end of Project area.
<i>Aquila chrysaetos</i>	Golden eagle	FP, CSC, MSHCP	Present	Undeveloped open terrain with grassland, pasture, sage scrub, and open woodland; regular inhabitant of rugged foothills and backcountry terrain with scattered farms, grassland valleys, and rock outcrops, as well as lakes and rivers; detected foraging above San Timoteo Canyon Road near proposed El Casco Substation site.
<i>Athene cunicularia</i>	Burrowing owl (burrow sites)	CSC, MSHCP	High (winter migrant)	Open lowlands including grasslands, desert scrub, and agricultural areas; suitable habitat occurs within grassland communities, especially from the central to eastern portions of proposed alignment and along canyon walls of several ephemeral washes that bisect proposed alignment.
<i>Buteo regalis</i>	Ferruginous hawk	CSC, MSHCP	Moderate (migrant)	Common in southern California grasslands and agricultural areas from mid-September to early April; may utilize open grasslands and agricultural fields for foraging.
<i>Buteo swainsoni</i>	Swainson's hawk	ST, MSHCP	Moderate (migrant)	Developed, non-native grassland, coastal sage scrub, agricultural fields, and chaparral for foraging; suitable foraging habitat occurs within open grasslands and agricultural fields along proposed alignment.

Table D.4-4. Known and Potential Occurrence of Sensitive Wildlife Species Within and Adjacent to Proposed Project

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
<i>Campylorhynchus bruneicapillus sandiegensis</i>	San Diego cactus wren	CSC, MSHCP	Unlikely	Coastal sage scrub with cacti for nesting; suitable habitat does not occur within Project area.
<i>Catharus ustulatus</i>	Swainson's thrush	CSC	Moderate	Riparian habitats; suitable habitat occurs along riparian corridor associate with San Timoteo Creek.
<i>Circus cyaneus</i>	Northern harrier	CSC, MSHCP	Present	Open habitats, meadows, grasslands, coastal sage scrub, chaparral; detected within open grasslands at several locations along proposed alignment.
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	FSC, SE, MSHCP	Present	Cottonwood-willow riparian habitat; detected within riparian habitat associate with San Timoteo Creek at western end where proposed alignment parallels SR-60.
<i>Cypseloides niger</i>	Black swift	CSC, MSHCP	Unlikely	Rugged terrain and coastal cliffs; suitable habitat does not occur in Project area.
<i>Dendroica petechia brewsteri</i>	Yellow warbler	CSC, MSHCP	Present	Riparian habitat; detected within riparian habitat associated with San Timoteo Creek between mileposts 2.0-2.3 of the proposed alignment.
<i>Elanus leucurus</i>	White-tailed kite	FP, MSHCP	Present	Low elevation, open grasslands, agricultural fields, wetlands, oak woodlands; uses areas with dense canopies for cover; detected foraging along several portions of proposed alignment.
<i>Empidonax traillii extimus</i>	Southwestern willow flycatcher	FE, SE, MSHCP	Present	Riparian thickets; detected at San Timoteo Creek. Documented near Thurman Flats Picnic Area approximately one mile north of Mill Creek site.
<i>Empidonax traillii brewsteri</i>	Northwestern willow flycatcher (migrant)	SE	Present (migrant)	Riparian forests; migrant detected on San Timoteo Creek near the proposed substation site.
<i>Eremophila alpestris actia</i>	California horned lark	CSC, MSHCP	Present	A variety of open habitats lacking trees and shrubs; detected within open areas near proposed El Casco Substation and agricultural fields near eastern end of proposed alignment.
<i>Falco columbarius</i>	Merlin	FP, CSC, MSHCP	Present	Breed in open country and winter in open grasslands, agricultural fields; suitable wintering habitat along open areas at eastern end of Project area. Identified along the Route Alternative Option 3 alignment.
<i>Falco mexicanus</i>	Prairie falcon	CSC, MSHCP	Present	Forages in open arid areas; requires cliffs for nesting; suitable habitat along transitional foothill to valley areas in Project area. Winter no breeding. Identified along the Route Alternative Option 3 alignment.
<i>Falco peregrinus</i>	Peregrine falcon	SE, FP, MSHCP	Present	Large variety of open habitats; breeds in woodland, forest, and coastal habitats; utilizes riparian areas year-round, especially during non-breeding seasons; detected passing over San Timoteo Creek near western portion of Project area.
<i>Icteria virens</i>	Yellow-breasted chat	CSC, MSHCP	Present	Dense riparian thickets of willow and other brushy tangles near watercourses; detected within riparian habitat associated with San Timoteo Creek between mileposts 2.0-2.3 of the proposed alignment.
<i>Lanius ludovicianus</i>	Loggerhead shrike	CSC, MSHCP	Present	Open habitats with sparse shrubs and trees, other perches, bare ground, and low or sparse herbaceous cover; riparian woodlands; detected foraging over several open areas within Project area.
<i>Plegadis chihi</i>	White-faced ibis	CSC, MSHCP	Unlikely	Nest in dense marsh vegetation near foraging areas in shallow water or muddy fields; suitable habitat does not occur in Project area.
<i>Polioptila californica californica</i>	Coastal California gnatcatcher	FT, CSC, MSHCP	Moderate	Low, dense coastal sage scrub; although highly fragmented, suitable habitat occurs within Riversidian sage scrub patches along portions of the proposed alignment.
<i>Progne subis</i>	Purple martin	CSC, MSHCP	Low	Valley foothill and montane hardwood and hardwood-conifer woodland, coniferous, and riparian habitats; rare and local breeder in interior mountain ranges; limited habitat in Project area.

Table D.4-4. Known and Potential Occurrence of Sensitive Wildlife Species Within and Adjacent to Proposed Project

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
<i>Toxostoma lecontei</i>	Le Conte's thrasher	CSC	Low	Sparse desert scrub such as creosote bush, Joshua tree, and saltbush scrubs, or sandy-soiled cholla-dominated vegetation; limited habitat towards eastern portion of proposed alignment.
<i>Vireo bellii pusillus</i>	Least Bell's vireo (nesting)	FE, SE, MSHCP	Present	Summer resident of cottonwood-willow forest, oak woodland, shrubby thickets, and dry washes with willow thickets at the edges; detected within riparian habitat associated with San Timoteo Creek, adjacent to El Casco Substation site and along proposed alignment between mileposts 2.0-2.3 and at milepost 4.5.
MAMMALS				
<i>Antrozous pallidus</i>	Pallid bat	CSC	Low	Deserts, grasslands, shrublands, woodlands, and forests with rocky areas for roosting; very sensitive to disturbance at roosting sites; limited habitat occurs in Project area.
<i>Canis latrans</i>	Coyote	MSHCP	Present	Utilize all habitat types in Project area; detected at proposed El Casco Substation site along within riparian habitat associated with San Timoteo Creek.
<i>Chaetodipus californicus femoralis</i>	Dulzura (California) pocket mouse	CSC	Low	Dry shrublands and lowland grasslands; last known occurrence in 1995 along northern edge of Banning (CNDDDB, 2007); suitable habitat occurs along several portions of proposed alignment.
<i>Chaetodipus fallax fallax</i>	Northwestern San Diego pocket mouse	CSC, MSHCP	Present	Coastal scrub, chaparral, disturbed grasslands; detected in portions of Smith Creek that bisect Project alignment.
<i>Chaetodipus fallax pallidus</i>	Pallid San Diego pocket mouse	CSC	Unlikely	Sage scrub, chaparral, non-native grasslands; project lies outside of known range for this species.
<i>Dipodomys merriami parvus</i>	San Bernardino kangaroo rat	FE, CSC, MSHCP	Low	Undisturbed Riversidian alluvial sage scrub with sandy loam soils; no suitable habitat occurs in the Project area. Not detected during 2007 trapping.
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE, ST, MSHCP	Unlikely	Annual grasslands with sparse perennial vegetation; marginal habitat in Project area due to little, if any, herbaceous substrate; east of known range; past occurrences are probably identified incorrectly and are likely Pacific kangaroo rat (Haas, pers. comm.).
<i>Eumops perotis californicus</i>	Western mastiff bat	CSC	High	Open semi-arid to arid; conifer and deciduous woodlands, coastal scrub, chaparral, grasslands; roosts in crevices of cliffs, structures; suitable habitat occurs along all riparian corridors in Project area.
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	CSC, MSHCP	Present	Non-native grasslands, Riversidean sage scrub, alluvial fan sage scrub, chaparral, disturbed; detected at several locations in Project area.
<i>Lynx rufus</i>	Bobcat	MSHCP	Present	Widespread throughout Project area, but most closely associated with rocky and brushy areas near perennial water source; detected at proposed El Casco Substation site within riparian habitat associated with San Timoteo Creek.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	CSC, MSHCP	High	Coastal sage scrub, chaparral, desert habitats; documented in chamise chaparral approximately 0.3 mile from Project route (CNDDDB, 2007); suitable habitat in several areas of Proposed Project.
<i>Nyctinomops femorosaccus</i>	Pocketed free-tailed bat	CSC	Low	Arid areas, including pine-juniper woodlands, desert scrub, desert wash, desert riparian, palm oasis; suitable habitat does not occur in Project area.
<i>Onychomys torridus ramona</i>	Southern grasshopper mouse	CSC	Low	Desert areas with low to moderate shrub cover; suitable habitat does not occur in Project area.
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	CSC, MSHCP	Present	Lower elevation grasslands and coastal scrub; open ground with fine, sandy soils; detected along portions of Smith Creek and Montgomery Creek that bisect proposed alignment. Detected during 2006 and 2007 trapping events.
<i>Puma concolor</i>	Mountain lion	SP, MSHCP	Moderate	Rocky areas, ledges, cliffs within chaparral and open woodlands; riparian habitat that provide connections to core areas; may utilize various habitats throughout Project area.

Table D.4-4. Known and Potential Occurrence of Sensitive Wildlife Species Within and Adjacent to Proposed Project

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
<i>Spermophilus tereticaudus chlorus</i>	Palm Springs round-tailed ground squirrel	FSC, CSC	Unlikely	Restricted to Coachella Valley; desert habitats, including scrub, wash, and levees. No suitable habitat occurs in Project area and project is outside known range for this species.
<i>Taxidea taxus</i>	American badger	CSC	Moderate	Open stages of most shrub, forest, and herbaceous habitats; not documented in Project area since 1908 (CNDDB, 2007). However, suitable habitat is present.

Sources: SCE PEA, CDFG 2006 and 2007; SCE Bio-technical Report 2007, Aspen 2006 and 2007 field surveys.

FT = Federally Threatened Species

FE = Federally Endangered Species

FSC = Federal Species of Special Concern

PT = Federally Proposed Threatened Species

FP = Federally Protected Species

MSHCP = MSHCP Covered Species

ST = State Threatened species

SE = State Endangered Species

CSC = California Species of Special Concern

DFGFP = CDFG Fully Protected Species

SP = State Fully Protected Species

Species Accounts

Invertebrates

Quino checkerspot (*Euphydryas editha quino*). The Quino checkerspot butterfly is a Federally Endangered Species and an MSHCP Covered Species. The Quino checkerspot occurs in coastal sage scrub, open chaparral, juniper woodland, forblands, and native grassland and is strongly associated with host plants. Some suitable habitat containing host plants is present in the Proposed Project vicinity, although no individuals were detected during surveys. The Quino chekerspot has a moderate potential to occur.

Amphibians

Western spadefoot (*Spea hammondi*). The western spadefoot is a California Species of Special Concern (CSC) and an MSHCP Covered Species. The western spadefoot occurs in coastal sage scrub, chaparral, and grasslands, where it may be found in sandy washes, on floodplains and in low hills. Temporary breeding pools are a crucial requirement for the spadefoot's continued occupation of an area. The CNDDB (2007) identifies 4 occurrences of western spadefoot dating from 1990 to 2005. Three of these records are within the Beaumont quadrangle, within one mile of the proposed alignment. The occurrences closest to the Project route are situated between Smith Creek and Montgomery Creek, ephemeral drainages just south of Interstate-10 and east of the Sun Lakes Community. Suitable habitat for western spadefoot occurs in this area, along with similar areas just south of the eastern boundary of the proposed alignment and between San Timoteo Canyon Road and SR-60. Therefore, this species has a high potential to occur.

Reptiles

Silvery legless lizard (*Anniella pulchra pulchra*). The silvery legless lizard is a CSC. In California, its range extends from Contra Costa County to the Mexican border. This species requires sandy or loose loamy soils under sparse vegetation for burrowing and is strongly associated with soils that contain high moisture content. It has been found in beaches, chaparral, or pine-oak woodland habitat and sycamore, cottonwood, or oak riparian habitat that grows on stream terraces. Potential habitat is present in chaparral communities along the proposed alignment. Therefore, this species has a moderate potential to occur.

[Click here for Figure D.4-2a](#)

[Click here for Figure D.4-2b](#)

[Click here for Figure D.4-2c](#)

[Click here for Figure D.4-2d](#)

[Click here for Figure D.4-2e](#)

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Orange-throated whiptail (*Aspidoscelis hyperythra*). The orange-throated whiptail is a CSC and an MSHCP Covered Species. The species current range includes southwestern California and Baja California. Orange-throated whiptails typically occur in chaparral, annual grasslands, Riversidian coastal sage scrub, and woodland habitats. This species is presumably tied to perennial vegetation because its primary food source, termites (Bostick, 1966), requires perennial plants as a food base. Plant species that may fulfill this requirement include California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), and sages (*Salvia* sp.).

Historic distribution information suggests that orange-throated whiptails were found throughout western Riverside County, although much of the habitat for the species has been converted to urban and agricultural uses in the Project area. The CNDDDB (2007) identifies three recent records of occurrence for this species within the Project area. These records include a variety of habitat types such as chaparral, grasslands, and Riversidian sage scrub. These habitats occur in the Project area; therefore, this species has a high potential to occur.

San Bernardino mountain kingsnake (*Lampropeltis zonata parvirubra*). The San Bernardino Mountain kingsnake is a CSC and MSHCP Covered Species. This species occurs in exposed canyons with rocky outcrops or rocky talus in close proximity to big cone spruce, canyon chaparral species, black oak, cedar, and several species of pine at higher elevations. Rocky outcrops and talus occur within the Project vicinity, but are limited within specific project elements. Therefore, this species has a moderate potential to occur.

Coast horned lizard (*Phrynosoma coronatum blainvillei*). The coast horned lizard has two subspecies whose geographical ranges overlap the Project area, the San Diego subspecies (*P. coronatum* ssp. *blainvillei*) and the California coastal subspecies (*P. coronatum* ssp. *frontale*). Both subspecies are CSC and the San Diego subspecies is an MSHCP Covered Species. Typically occurring in chaparral and scrub habitats with ample numbers of native ant prey, these lizards usually occupy habitats that have open basking areas and loose soils for burrowing. Coast horned lizard was detected during surveys along riparian habitat near milepost 1.6 of the proposed alignment. Additionally, the CNDDDB (2007) lists several records for the coast (San Diego) horned lizard within the quadrangles that overlay the Proposed Project alignment. These records date from between the 1890s to 2004 and include a variety of habitat types. Suitable habitat for this subspecies may occur in almost any upland habitat within the Project area that has not been urbanized or converted to agriculture.

Coast patch-nosed snake (*Salvadora hexalepis virgultea*). The coast patch-nosed snake is a CSC. This species occurs in a variety of habitats with low shrub structures with minimum density. These snakes are presumed to take refuge and perhaps overwinter in burrows or woodrat nests. The known range for this species extends from near Creston (San Luis Obispo County) to Baja California at elevations between sea level and 2130 meters. The CNDDDB lists no known records for this species in the Project area, however, suitable habitat occur throughout the proposed alignment. Therefore, this species has a moderate potential to occur.

Two-striped garter snake (*Thamnophis hammondi*). The two-striped garter snake is a CSC. This highly aquatic species occurs within permanent waters, often along streams with rocky beds and riparian habitat. It is known to occur in coastal California from Salinas to Baja California. The CNDDDB (2007) lists 3 occurrences for the two-striped garter snake within the Yucaipa quadrangle just north of the Proposed Project alignment, dating from 1993 to 2005. These occurrences are primarily associated with the Santa Ana River located approximately 15 miles downstream from the Proposed Project. Although two-striped garter snakes have not been documented in the immediate Project area, suitable habitat for this

species occurs along portions of San Timoteo Creek adjacent to the proposed El Casco substation site and between mileposts 3.9 to 6.3 of the Proposed Project alignment. Due to the presence of highly suitable habitat along portions of San Timoteo Creek, this species has a high potential to occur.

Birds

Cooper's hawk (*Accipiter cooperii*). The Cooper's hawk is a CSC and MSHCP Covered Species. This species typically occurs near woodlands and nests in riparian habitat, oaks, and has adapted to include residential neighborhoods as foraging habitat and sometimes nests in park-like settings. The Cooper's hawk feeds on small to medium-sized birds, small mammals, reptiles and amphibians. This species was detected foraging above the proposed El Casco Substation site and suitable nesting habitat occurs along the riparian habitat associated with San Timoteo Creek.

Sharp-shinned hawk (*Accipiter striatus*). The sharp-shinned hawk is a CSC and MSHCP Covered Species. This species is associated with riparian habitat, and nests in ponderosa pine, black oaks, riparian deciduous, mixed conifer, and Jeffrey pine habitats. This species is not known to nest in Southern California, although migratory individuals are likely during the winter. While no records exist within the project vicinity, this species likely occurs. Suitable riparian habitat occurs along portions of San Timoteo Creek and suitable foraging habitat occurs within the open grasslands and agricultural fields along the proposed alignment. Therefore, migratory individuals have a high potential to occur.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). The Southern California rufous-crowned sparrow is a CSC and MSHCP Covered Species. This species is a permanent resident in southern California and occurs in open oak woodlands and treeless dry uplands with grassy vegetation and bushes. The CNDDDB lists several recent records of this species occurring within San Timoteo Canyon. Suitable habitat occurs along the chamise chaparral-covered hills at the western end of the proposed alignment. Therefore, this species has a high potential to occur.

Bell's sage sparrow (*Amphispiza belli belli*). The Bell's sage sparrow is a CSC and MSHCP Covered Species. Typically, this species occurs as a non-migratory resident in southern California. Bell's sage sparrow occurs in dry chaparral and coastal sage scrub habitats. Although no records of this species exist in the project vicinity, it is known to occur throughout western Riverside County and suitable habitat is present along the chaparral dominated hillsides at the western end of the proposed alignment. Therefore, this species has a high potential to occur.

Golden eagle (*Aquila chrysaetos*). The golden eagle is a CSC species, MSHCP Covered Species, a state fully protected species, and a federally protected species under the Bald and Golden Eagle Protection Act of 1940. This species typically occurs in areas of rolling foothills, sage-juniper flats, and desert. This species nests in large, old growth trees in open areas, in cliff-walled canyons, and may utilize transmission line towers. A single golden eagle was observed foraging overhead near San Timoteo Canyon Road, just west of the proposed El Casco Substation site. No eagle nests were observed within the existing transmission line towers. Nesting habitat in cliff-walled canyons does not occur within the Project area, and scattered oaks large enough to provide nesting habitat are limited. Therefore, the potential for this species to occur within the Project area is high, but nesting sites are unlikely.

Burrowing owl (*Athene cunicularia*). The burrowing owl is a CSC and MSHCP Covered Species. This species requires open areas with low-lying vegetation, consisting of dry, sparse grasslands, open desert scrub, and agricultural areas. This species typically utilizes burrows of California ground squirrels. The project lies within the MSHCP required survey area for burrowing owls. Although

focused surveys for this species concluded that the species is absent from the Project area, suitable habitat occurs within several areas of the proposed alignment, particularly the central to eastern portions and along canyon walls of the ephemeral washes that bisect the alignment. Therefore, this species has a high potential to occur.

Ferruginous hawk (*Buteo regalis*). The ferruginous hawk is a CSC and MSHCP Covered Species. This species occurs as a winter resident in southern California and requires large, open tracts of grasslands, sparse shrub, or agricultural fields for wintering. Suitable habitat for this species occurs within several open grasslands and agricultural fields along the central and eastern portions of the proposed alignment. Therefore, this species has a moderate potential to occur as a winter migrant.

Swainson's hawk (*Buteo swainsonii*). The Swainson's hawk is a State threatened and MSHCP Covered Species. Swainson's hawks typically occur in Riverside County as winter migrants. This species may forage in open grasslands, coastal sage scrub, agricultural fields, chaparral, and developed areas and will utilize nearby sparse stands of trees for roosting. The Swainson's hawk has been recorded in very few locations within the central portion of the western Riverside County area and appears to be absent from the montane regions. It would be expected to occur within agricultural areas with rural and low density residential and would occur for short periods of time during its migration from wintering to breeding areas. The CNDDB did not identify an occurrence within the Proposed Project area and this species was not detected during surveys. However, the Western Riverside MSHCP indicates multiple occurrences for this species. The habitats within which the observations were recorded include residential, non-native grassland, sage scrub, cropland and chaparral, all likely habitats for the Swainson's hawk to migrate through, to be observed during flight, and also to forage within during a migration stopover. As such, suitable foraging and roosting habitat for Swainson's hawk occurs throughout the Proposed Project area. Therefore, there is a moderate potential for the occurrence of this species.

Swainson's thrush (*Catharus ustulatus*). The Swainson's thrush is a CSC. In the western portions of its range, this species in willow thickets along shaded streams. Swainson's thrush is common as a migrant and summer resident in California and is absent in winter. No key populations exist in the general project region but the species has been recorded near Lake Matthews, Temecula Creek and Wilson Creek. The species probably occurs as a breeding bird in the Prado Basin and Santa Ana River region, west of the Project area. Otherwise, it occurs throughout western Riverside County as a spring and fall migrant. Suitable habitat occurs along portions of San Timoteo Creek adjacent to the proposed El Casco Substation site and portions of the proposed alignment. Therefore, there is a moderate potential for the occurrence of this species.

Northern harrier (*Circus cyaneus*). The northern harrier is a CSC and MSHCP Covered Species. This species is associated with meadows, marshes, and wetlands and is known to forage in grasslands. This species nests on the ground, typically in shrubby areas on the edges of wetlands. Northern harrier was observed foraging over grasslands towards the western portion of the proposed alignment. This species may occur as a breeding species in the Project area, although no evidence of breeding was observed.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). The western yellow-billed cuckoo is listed as endangered by the state government, is a candidate for federal listing, and is an MSHCP Covered Species. This species is a rare species in southern California. It nests in dense riparian scrub habitat during the summer. An individual was observed within riparian habitat along San Timoteo Creek just west of where the proposed alignment crosses SR-60. This individual was only seen during one day and was not detected again. Although the species was observed, riparian habitat in the area is only marginally suitable. This species typically prefers much denser riparian vegetation than the habitat

occurring along San Timoteo Creek. For this reason, it is assumed that the individual detected during surveys was a transient and an isolated occurrence (Haas, pers. comm.). However, based on survey results there is a moderate potential for the occurrence of this species.

Yellow warbler (*Dendroica petechia brewsteri*). The yellow warbler is a CSC and MSHCP Covered Species. This species typically occurs in riparian areas with willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. It is also known to nest in montane shrubbery in open conifer forests. This species was detected in riparian habitat associated with San Timoteo Creek, between mileposts 2.0 and 2.3 of the proposed alignment during focused avian surveys conducted in 2005, 2006, and 2007. Suitable riparian habitat occurs along several portions of the Project area that lie adjacent to San Timoteo Creek.

White-tailed kite (*Elanus leucurus*). The white-tailed kite is a California fully protected species and an MSHCP Covered Species. This species occurs in rolling foothills and valley margins that have scattered oaks, riparian habitat, or marshes next to deciduous woodlands. This species forages in open grasslands, meadows, and marshes, and often nests in dense tree stands near open foraging areas. White-tailed kite was detected foraging over several portions of the proposed alignment. Suitable nesting habitat for this species does not occur in the Project area; however, foraging may occur over many of the open grasslands and agricultural fields that exist along the proposed alignment.

Willow flycatcher (*Empidonax traillii*). The willow flycatcher is listed as endangered by the State government and the southwestern subspecies (*E. traillii extimus*) is listed as endangered by the federal government. This species (and subspecies) is a summer resident that occurs in extensive thickets of low, dense willows on the edges of wet meadows, ponds, backwaters, and creeks. Both of the sub species have been identified at San Timoteo Creek. The Proposed Project area does not contain critical habitat for southwestern willow flycatcher, although critical habitat has been designated along portions of the Santa Ana River, including its confluence with San Timoteo Creek. The area where these two water bodies join is located approximately 15 miles downstream from the Proposed Project.

The Proposed Project area supports potential breeding habitat for this species in a variety of riparian habitat types (e.g., southern riparian forest and willow scrub). The CNDDDB (2007) identified 2 occurrences for southwestern willow flycatcher within the El Casco quadrangle which overlays the proposed and alternate substation sites along with portions of the proposed and alternate alignments. These occurrences were documented in 2004 and were associated with San Timoteo Creek. Additionally, surveys conducted in 2005, 2006, and 2007 detected southwestern willow flycatchers near the site for the proposed substation (SCE, 2007a; Aspen, 2007).

California horned lark (*Eremophila alpestris actia*). The California horned lark is a CSC and MSHCP Covered Species. This subspecies is a common to abundant resident in a variety of open habitats, usually where trees and large shrubs are absent. Flocks of horned larks were observed within the open areas adjacent to the proposed El Casco Substation site. Although the subspecies was not identified, it is assumed that the California horned lark is present on site.

Merlin (*Falco columbarius*). The merlin is a state fully-protected species, a CSC, and an MSHCP Covered Species. It only occurs in southern California as a winter migrant. It is associated with seacoasts, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. This species is an aerial predator that preys on small birds. Although no records for this species occur within the area, suitable foraging habitat occurs throughout the Project area. This animal was identified during the 2007 surveys of the Northerly Alternative (Haas, pers. comm.).

Prairie falcon (*Falco mexicanus*). The prairie falcon is a CSC and MSHCP Covered Species. This species occurs in dry, hilly or level open terrain. Prairie falcons require cliffs for nesting. This species forages for small mammals in open desert scrub, arid areas, and grasslands. No suitable nesting habitat occurs within the Project survey area. This species has been recently detected foraging just north of existing Banning Substation (Haas, pers. comm.). Suitable foraging habitat occurs for this species throughout the Project area. Therefore, the potential for occurrence is moderate.

Peregrine falcon (*Falco peregrinus*). The peregrine falcon is listed as endangered by the state government, and is a state fully-protected species, a CSC, and an MSHCP Covered Species. This species typically occurs in coastal Southern California and prefers habitat near wetlands, lakes, rivers, ocean, and other waters. This species naturally nests on rocky cliffs, but has adapted to include manmade structures such as bridges and building ledges. Two adult individuals were detected during surveys conducted by SCE in 2007. These individuals were observed flying overhead near San Timoteo Creek and there were no indications that the birds were foraging. Although this species was detected, suitable habitat is limited in the Project area and the potential for occurrence is considered low.

Yellow-breasted chat (*Icteria virens*). The yellow-breasted chat is a CSC and MSHCP Covered Species. This species occurs as a summer resident and requires dense willow riparian thickets and other brushy tangles for nesting. These areas typically have a thick understory of willow, blackberry, and wild grape. Yellow-breasted chat was detected within riparian habitat associated with San Timoteo Creek between mileposts 2.0 and 2.3 of the proposed alignment during surveys conducted in 2005, 2006, and 2007. Suitable habitat occurs along several portions of the Project area that lie adjacent to San Timoteo Creek.

Loggerhead shrike (*Lanius ludovicianus*). The loggerhead shrike is a CSC and MSHCP Covered Species. This species occurs as a yearlong resident, breeding and wintering, in western Riverside County. Loggerhead shrike are known to forage over open ground with areas of short vegetation, agricultural fields, riparian areas, desert habitats, and grasslands. This species was detected foraging over several open areas in the Project area. Suitable habitat for this species occurs throughout the Project area.

Coastal California gnatcatcher (*Polioptila californica californica*). The coastal California gnatcatcher is listed as threatened by the federal government and is a CSC and MSHCP Covered Species. The Project is not located within proposed or final critical habitat for this species (USFWS, 2007). This species occurs from south Ventura County to Baja California and is associated with coastal sage scrub habitat that occurs at elevations below 3000 feet. Although no records for this species exist in the Project area, suitable habitat occurs within coastal scrub dominated hillsides near the proposed El Casco Substation site and the western portions of the proposed alignment. Therefore, there is a moderate potential for the occurrence of this species.

Least Bell's vireo (*Vireo bellii pusillus*). The least Bell's vireo is listed as endangered by the state and federal agencies and is an MSHCP Covered Species. The Proposed Project is not located within designated critical habitat for this species (USFWS, 1994). This species is a summer resident and occurs within lowland riparian habitat along waterways and dry washes. The Proposed Project area supports potential breeding habitat for this species in a variety of riparian habitat types (e.g., southern riparian forest and willow scrub). The CNDDDB (2007) identified 1 occurrence for least Bell's vireo within the El Casco quadrangle. This occurrence was documented in 1978 near Fisherman's Retreat, approximately 1.6 miles northwest of the proposed substation. While the CNDDDB only identifies a single occurrence, least Bell's vireos were detected during surveys conducted in 2005, 2006, and 2007 (SCE 2007, Aspen 2007). Three territorial males were detected in the riparian habitat in the vicinity of

the proposed substation site in 2006. One of the males exhibited behaviors characteristic of being paired and nest tending; however, no females or young were ever confirmed near the site during this survey. Additional individuals were detected in 2006 northwest of the alternative substation site. Further, a total of at least four least Bell's vireo territories were detected in the vicinity of the proposed alignment, all within riparian habitat associated with San Timoteo Canyon. These four territories are located near mileposts 2.0-2.3. An additional least Bell's vireo was detected near milepost 4.5; however, this individual was detected during informal, non-USFWS protocol surveys.

Mammals

Coyote (*Canis latrans*). The coyote is an MSHCP Covered Species. Coyotes utilize all habitat types and are often found in urban areas adjacent to open land. Primary habitats include grasslands, short-grass prairies, semiarid sagebrush, and broken forests. This species was detected during surveys in the riparian area adjacent to the proposed El Casco Substation site. Habitat restrictions for this species are wide-ranging and a variety of habitats utilized by this species occurs throughout the Project area. Therefore, there is a high potential for the occurrence of this species.

Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*). The northwestern San Diego pocket mouse is a CSC and MSHCP Covered Species. This species occurs in coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities. Like other desert-adapted heteromyid rodents, this species is a granivore (seed eater) and will harvest seeds from buckwheat, sumac, and California sagebrush plants in the winter and spring. During the summer months, the San Diego pocket mouse will utilize grass seeds and insects, occasionally. The CNDDDB (2007) identifies several occurrences, dating from 1992 to 2002, of San Diego pocket mouse within the quads that overlay the Proposed Project area. Three of these records occur within one mile of the proposed alignment and include a variety of habitats, such as Riversidian sage scrub, grasslands, and chaparral. Additionally, this species was detected along portions of Smith Creek that bisect the proposed alignment during surveys conducted in 2006. Due to observations of this species during focused surveys and suitable habitat along portions of the proposed alignment, there is a high potential for the occurrence of this species.

Western mastiff bat (*Eumops perotis californicus*). The western mastiff bat is a CSC. This species is the largest of all North American bats and occurs in various habitats where suitable roosting sites are available, including cliff faces and man-made structures. Although no records exist for this species in the Project area, suitable habitat occurs throughout the general project region. Therefore, there is a high potential for the occurrence of this species.

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). The San Diego black-tailed jackrabbit is a CSC and MSHCP Covered Species. The black-tailed jackrabbit is widespread throughout the western United States, west from central Missouri and Arkansas, and only is absent from the higher elevations of the Rocky Mountains, the Sierra Nevada, and the Cascades (Hall, 1981). It ranges south into central Mexico. This subspecies, which is one of nine subspecies of black-tailed-jackrabbit (Dunn et al. 1984), is confined to coastal Southern California. The black-tailed-jackrabbit occupies many diverse habitats in Riverside County, including most areas that support annual grassland, Riversidean sage scrub, alluvial fan sage scrub, Great Basin sagebrush, chaparral, disturbed habitat, and agriculture. The CNDDDB identifies three occurrences, dating from 2003 to 2004, in the El Casco quadrangle. Two of these occurrences are located within one mile south of the proposed alignment and are associated with chaparral habitat in the foothills of the San Jacinto Mountains. Additionally, this species was common in the Project area through visual observations and trace evidence during surveys conducted in the Project area in 2006 and 2007.

Bobcat (*Lynx rufus*). The bobcat is an MSHCP Covered Species. Although widespread throughout Riverside County, this species is closely associated with rocky and brushy areas near springs or other perennial water sources, primarily in foothills comprised of chaparral habitats. This species was detected during surveys within riparian habitat associated with San Timoteo Creek, adjacent to the proposed El Casco Substation site. Suitable habitat for this species occurs primarily along the western portions of the Proposed Project where chaparral dominated foothills abut San Timoteo Creek.

San Diego desert woodrat (*Neotoma lepida intermedia*). The San Diego desert woodrat is a CSC and MSHCP Covered Species. The desert woodrat (*N. lepida*) is widespread throughout central and southern California and the Great Basin, Mojave, and Colorado deserts. Marginal records for the San Diego desert woodrat (*N. l. intermedia*) in the United States include San Luis Obispo; San Fernando; San Bernardino Mts.; Redlands; and Julian (Hall, 1981). This species is found in a variety of shrub habitats, including Riversidean and coastal sage scrub and chaparral. The closest known occurrence lies approximately 0.3 miles from the proposed alignment in chamise chaparral. Suitable habitat for San Diego desert woodrat occurs throughout the Proposed Project area wherever shrub habitats exist. Therefore, there is a high potential for the occurrence of this subspecies.

Los Angeles pocket mouse (*Perognathus longimembris brevinasus*). The Los Angeles Pocket mouse is a CSC and MSHCP Covered Species. The Proposed Project is located within the MSHCP Mammalian Survey Area for this species. Los Angeles pocket mouse inhabits open ground and lower level grasslands and coastal sage associations in the Los Angeles basin with soils composed of fine sands. It often seeks refuge beneath weeds and leaf litter debris and it is thought to rely solely on seeds and grain. This species was detected along portions of Smith and Montgomery Creeks, each bisecting the eastern portions of the proposed alignment. Suitable habitat for Los Angeles pocket mouse occurs along these creeks and along several unnamed ephemeral washes occurring in the Project area.

Mountain lion (*Puma concolor*). The mountain lion is a state protected and MSHCP Covered Species. Mountain lions typically utilize rocky areas, cliffs, and ledges that provide cover within open woodlands and chaparral, as well as riparian areas that provide protective habitat connections for movement between fragmented core habitat. This species is known to occur in the mountain ranges surrounding the Proposed Project area. While no mountain lions were observed during any surveys, trace evidence, including scat and prints were detected within an open field at the eastern end of the proposed alignment. Although suitable habitat is limited in the Project area, this species may utilize various habitats throughout the Project area for foraging. Therefore, there is a moderate potential for the occurrence of this species.

American badger (*Taxidea taxus*). The American badger is a CSC. It occurs in most stages of shrub, forest, and herbaceous habitat, especially desert scrub habitat with friable soils and low to moderate shrub density. This species has not been documented in the Project area since 1908; however, suitable habitat occurs throughout the chaparral and scrub habitats. Therefore, this species has a moderate potential to occur.

D.4.1.3.6 Wildlife Corridors and Special Linkages

Linkages and corridors facilitate regional animal movement and are generally centered around waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Drainages generally serve as movement corridors because wildlife can move easily through these areas, and fresh water is available. Corridors also offer wildlife unobstructed terrain for foraging and for dispersal of young individuals. Ridgelines that occur throughout the Project area may also serve as movement corridors.

As the movements of wildlife species are more intensively studied using radio-tracking devices, there is mounting evidence that some wildlife species do not necessarily restrict their movements to some obvious landscape element, such as a riparian corridor. For example, recent radio-tracking and tagging studies of Coast Range newts, California red-legged frogs, southwestern pond turtles, and two-striped garter snakes found that long-distance dispersal involved radial or perpendicular movements away from a water source with little regard to the orientation of the assumed riparian “movement corridor.” Likewise, carnivores do not necessarily use riparian corridors as movement corridors, frequently moving overland in a straight line between two points when traversing large distances. In general the following corridor functions can be utilized when evaluating impacts to wildlife movement corridors:

- a. **Movement corridors** are physical connections that allow wildlife to move between patches of suitable habitat. Simberloff et al. (1992) and Beier and Loe (1992) correctly state that, for most species, we do not know what corridor traits (length, width, adjacent land use, etc.) are required for a corridor to be useful. But, as Beier and Loe (1992) also note, the critical features of a movement corridor may not be its physical traits but rather how well a particular piece of land fulfills several functions, including allowing dispersal, plant propagation, genetic interchange, and recolonization following local extirpation.
- b. **Dispersal corridors** are relatively narrow, linear landscape features embedded in a dissimilar matrix that links two or more areas of suitable habitat that would otherwise be fragmented and isolated from one another by rugged terrain, changes in vegetation, or human-altered environments. Corridors of habitat are essential to the local and regional population dynamics of a species because they provide physical links for genetic exchange and allow animals to access alternative territories as dictated by fluctuating population densities.
- c. **Habitat linkages** are broader connections between two or more habitat areas. This term is commonly used as a synonym for a wildlife corridor (Meffe and Carroll, 1997). Habitat linkages may themselves serve as source areas for food, water, and cover, particularly for small- and medium-size animals.
- d. **Travel routes** are usually landscape features, such as ridgelines, drainages, canyons, or riparian corridors within larger natural habitat areas that are used frequently by animals to facilitate movement and provide access to water, food, cover, den sites, or other necessary resources. A travel route is generally preferred by a species because it provides the least amount of topographic resistance in moving from one area to another yet still provides adequate food, water, or cover (Meffe and Carroll, 1997).
- e. **Wildlife crossings** are small, narrow areas of limited extent that allow wildlife to bypass an obstacle or barrier. Crossings typically are manmade and include culverts, underpasses, drainage pipes, bridges, and tunnels to provide access past roads, highways, pipelines, or other physical obstacles. Wildlife crossings often represent “choke points” along a movement corridor because useable habitat is physically constricted at the crossing by human-induced changes to the surrounding areas (Meffe and Carroll, 1997).

According to Section 3.0 of the MSHCP, the MSHCP Conservation Area is comprised of a variety of existing and proposed Cores, Extensions of Existing Cores, Linkages, Constrained Linkages and Non-continuous Habitat Blocks. The Proposed Project is located within Proposed Constrained Linkage Area 22. The MSHCP defines a Constrained Linkage as “a constricted connection expected to provide for movement of identified Planning Species between Core Areas, where options for assembly of the connection are limited due to existing patterns of use.” Section 3.0 of the MSHCP identifies Proposed Constrained Linkage Area 22 as comprising a portion of San Timoteo Creek that serves as a critical corridor for wildlife movement in the region. The primary conservation goal for this linkage is to

maintain the habitat quality for all associated species, including least Bell's vireo and Los Angeles pocket mouse, and other large mammal species using the creek as a wildlife corridor. In order to reach this goal, the MSHCP indicates that the management of edge conditions will be necessary to ensure maintenance of floodplain processes and movement of mammals through this Linkage.

Two smaller regions, identified as Proposed Linkage 5 and Proposed Linkage 12 are also located within the Proposed Project area. As defined by Section 3.0 of the MSHCP, "Proposed Linkage 5 is comprised of the portion of San Timoteo Creek extending northwest from Redlands Boulevard to San Bernardino County. This Linkage provides habitat for a number of Planning Species, including Los Angeles pocket mouse, yellow-breasted chat, least Bell's vireo, bobcat, and yellow warbler. This linkage likely provides for movement of mountain lion and bobcat...Maintenance of wetland functions and values and water quality of San Timoteo Creek is important for these species..." The MSHCP also states "Proposed Linkage 12 is comprised of riparian habitat associated with San Timoteo Creek. Planning Species which use this Linkage include yellow warbler, white-tailed kite, yellow-breasted chat, least Bell's vireo, and Los Angeles pocket mouse. This Linkage likely provides for movement of common mammals such as bobcat connecting San Bernardino County and Core Areas in the Badlands. Maintenance of habitat quality and wetland functions and values of San Timoteo Creek are important for these species."

D.4.1.4.7 Jurisdictional Waters

Major waterways that cross the Proposed Project area include San Timoteo Creek, Potrero Creek, Smith Creek, Montgomery Creek, and various unnamed blue-line streams and ephemeral drainages.

U.S. Army Corps of Engineers Jurisdiction

The discharge (temporary or permanent) of dredged or fill material into Waters of the United States (including wetlands) typically requires prior authorization from the U.S. Army Corp of Engineers (USACE), pursuant to Section 404 of the Clean Water Act (CWA).

Approximately 0.08 acre of USACE non-wetland waters and 0.04 acre of USACE wetland waters are expected to be temporarily impacted by the Proposed Project within the bed and banks of San Timoteo Creek and its tributaries and Montgomery Creek. Additionally, approximately 0.001 acre of USACE non-wetland waters are expected to be permanently impacted within an unnamed ephemeral drainage located approximately 400 feet east of the intersection of Bobcat Road and Turtle Dove Lane in unincorporated Riverside County south of the City of Banning. No USACE wetland waters are expected to be permanently impacted by Proposed Project activities.

Regional Water Quality Control Board

The Regional Water Quality Control Board (RWQCB) regulates activities within State and federal waters under Section 401 of the federal CWA and the State Porter-Cologne Act.

The Proposed Project is expected to result in temporary impacts to 0.11 acre and permanent impacts to 0.02 acre of RWQCB jurisdictional waters. Temporary impacts are expected to occur along portions of San Timoteo Creek, an ephemeral tributary to San Timoteo Creek, a concrete V-ditch located north of Fourth Street in the City of Beaumont, and the unnamed ephemeral drainage located approximately 400 feet east of the intersection of Bobcat Road and Turtle Dove Lane in unincorporated Riverside County south of the City of Banning.

California Department of Fish and Game Jurisdiction

Under current California Fish and Game Code Sections 1600–1616, the DFG has authority to regulate work that will substantially divert or obstruct the natural flow of, change, or use any material from the bed, channel, or bank of any river, stream, or lake. The DFG also has authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects involving State or local government discretionary approvals.

Approximately 0.75 acre and 0.043 acre of CDFG jurisdictional waters and associated riparian habitat are expected to be temporarily and permanently impacted by the Proposed Project, respectively. Temporary impacts are expected to occur along portions of San Timoteo Creek, an ephemeral tributary to San Timoteo Creek, a concrete V-ditch located north of Fourth Street in the City of Beaumont, an unnamed ephemeral drainage located approximately 400 feet east of the intersection of Bobcat Road and Turtle Dove Lane in unincorporated Riverside County south of the City of Banning, and Montgomery Creek. Permanent impacts are expected to be limited to a small portion of San Timoteo Creek at the northeast corner of the proposed El Casco Substation and the unnamed ephemeral drainage near the intersection of Bobcat Road and Turtle Dove Lane.

Western Riverside MSHCP Jurisdiction

Preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP) report is required under the MSHCP for projects that involve impacts to riparian/riverine resources and/or vernal pools. The purpose of the DBESP report is to ensure replacement of any lost functions and values of habitat as it relates to Covered Species.

Surveys concluded that conditions necessary to support vernal pools do not occur in the Proposed Project area. Approximately 0.75 acre of MSHCP riparian/riverine habitat is expected to be temporarily impacted by the Proposed Project. Additionally, approximately 0.043 acre of MSHCP riparian/riverine habitat is expected to be permanently impacted by the Proposed Project. Temporary impacts are expected along portions of San Timoteo Creek, an ephemeral tributary to San Timoteo Creek, a V-ditch located north of Fourth Street in the City of Beaumont, an unnamed ephemeral drainage located approximately 400 feet east of the intersection of Bobcat Road and Turtle Dove Lane in unincorporated Riverside County south of the City of Banning, and Montgomery Creek. Permanent impacts are expected to be limited to small portions of San Timoteo Creek, including along the south side of the SR-60 road bridge crossing San Timoteo Creek and approximately 300 feet upstream from the poultry processing facility, the unnamed ephemeral drainage near the intersection of Bobcat Road and Turtle Dove Lane, and Montgomery Creek.

D.4.2 Regulatory Framework

D.4.2.1 Federal

Endangered Species Act of 1973 (16 U.S.C. 1531-1543). The Endangered Species Act (ESA) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend.

Migratory Bird Treaty Act (16 U.S.C. 703-711). The Migratory Bird Treaty Act (MBTA) is a treaty with Canada, Mexico and Japan that makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as

swallow nests on bridges) occupied by migratory birds during the breeding season. The Act states that it is unlawful to take, pursue, molest, or disturb bald (American) and golden eagles, their nests, or their eggs anywhere in the United States.

Clean Water Act (33 U.S.C. 1251-1376). The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 10 of the Rivers and Harbors Act (33 U.S.C. 401 et seq.). Section 10 of the Rivers and Harbors Act is administered by U.S. Army Corps of Engineers (USACE). This section requires permits in navigable waters of the U.S. for all structures such as riprap and activities such as dredging. Navigable waters are defined as those subject to the ebb and flow of the tide and susceptible to use in their natural condition or by reasonable improvements as means to transport interstate or foreign commerce. The USACE grants or denies permits based on the effects on navigation. Most activities covered under this act are also covered under Section 404 of the CWA.

Bald Eagle Protection Act of 1940, 16 U.S.C. 668, enacted by 54 Stat. 250. The Bald Eagle Protection Act of 1940 protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act.

National Wildlife Refuge System Administration Act of 1966, 42 U.S.C. 668dd, enacted by Pub. L. No. 91-135 as amended. The National Wildlife Refuge System Administration Act of 1966 provides guidelines and directives for the administration and management of all lands within the system, including "wildlife refuges, areas for the protection and conservation of fish and wildlife that are threatened with extinction, wildlife ranges, game ranges, wildlife management areas, or waterfowl production areas." The Secretary of the Interior is authorized to permit by regulations the use of any area within the system provided "such uses are compatible with the major purposes for which such areas were established."

Executive Order 11990 Protection of Wetlands (May 24, 1977). This order establishes a National policy to avoid adverse impacts on wetlands whenever there is a practicable alternative.

D.4.2.2 State

California Environmental Quality Act (P.R.C. 21000 et seq.). CEQA establishes State policy to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures. CEQA applies to actions directly undertaken, financed, or permitted by State lead agencies. Regulations for implementation are found in the State CEQA Guidelines published by the Resources Agency. These guidelines establish an overall process for the environmental evaluation of projects.

California Endangered Species Act (Fish and Game Code 2050 et seq.). The California Endangered Species Act (CESA) establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no State agency consultation procedures under CESA. For projects that affect both a State and federal listed species, compliance with the Federal Endangered Species Act (FESA) will satisfy CESA if the Department of Fish and Game (DFG) determines that the federal incidental take authorization is "consistent" with CESA under F&G Code Section 2080.1. For projects that will result in a take of a State-only listed species, the Applicant must apply for a take permit under section 2081(b).

Native Plant Protection Act (Fish and Game Code 1900-1913). California's Native Plant Protection Act (NPPA) requires all State agencies to utilize their authority to carry out programs to conserve endangered and rare native plants. Provisions of NPPA prohibit the taking of listed plants from the wild and require notification of the DFG at least 10 days in advance of any change in land use. This allows DFG to salvage listed plant species that would otherwise be destroyed. The Applicant is required to conduct botanical inventories and consult with DFG during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

California Wild and Scenic Rivers Act (P.R.C. 5093.50 et seq.). This act preserves certain designated rivers in their free-flowing state. These rivers must possess extraordinary scenic, recreational, fishery, or wildlife values. The Resources Agency is responsible for coordinating activities of State agencies that may affect these designated rivers.

Sections 1601-1603 of the Fish and Game Code. Under these sections of the Fish and Game Code, the Applicant is required to notify DFG prior to any project that would divert, obstruct or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, DFG is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications and bid documents for the project.

Section 3503 and 3503.5 of the Fish and Game Code. Under these sections of the Fish and Game Code, the Applicant is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds of prey, taking or possessing of any migratory non-game bird as designated in the Migratory Bird Treaty Act, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the Migratory Bird Treaty Act, or the taking of any non-game bird pursuant to Fish and Game Code Section 3800.

Porter-Cologne Water Quality Control Act. Regional water quality control boards regulate the "discharge of waste" to "waters of the State." All projects proposing to discharge waste that could affect waters of the State must file a waste discharge report with the appropriate regional board. The board responds to the report by issuing waste discharge requirements (WDR) or by waiving WDRs for that project discharge. Both of the terms "discharge of waste" and "waters of the State" are broadly defined such that discharges of waste include fill, any material resulting from human activity, or any other "discharge." Isolated wetlands within California, which are no longer considered "waters of the United States" as defined by Section 404 of the CWA, are addressed under the Porter-Cologne Act.

D.4.2.3 Local

Riverside County Integrated Project 2002 General Plan (2003). This plan sets policy direction for the open space related resources of Riverside County. These policies relate to the preservation, use and development of a comprehensive open space system consisting of passive open space areas, and parks and recreation areas that have recreational, scenic, and ecological value. Policies pertaining to open space include: 1) Preserve and maintain open space that protects County environmental resources and maximizes public health and safety in areas where significant environmental hazards and resources exist; and 2) Prevent unnecessary extension of public facilities, services, and utilities, for urban uses, into Open Space-Conservation designated areas. This plan also directs policy towards the conservation of native vegetation in Riverside County. These policies are based on maintaining the ecological diversity in Riverside County through the management of native vegetation. Policies that are intended to protect superior examples of native vegetation resources in conjunction with permitted uses include: 1)

Update the Vegetation Map for Western Riverside County in consultation with the California Department of Fish and Game, the Natural Diversity Data Base, the United States Forest Service, and other knowledgeable agencies and the County shall also provide these agencies with data as needed; 2) Expand Vegetation mapping to include the eastern portion of the County of Riverside; 3) Maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes; 4) Conserve the oak tree resources in the County; 5) Encourage research and education on the effects of smog and other forms of pollution on human health and on natural vegetation.

San Bernardino County General Plan (2007). This plan promotes growth and development consistent with the maintenance of environmental quality. The plan divides the County into three separate and distinct Planning Regions: 1) The Valley Planning Region includes all of the area in the County that is south and west of the U.S. Forest Service boundaries; 2) the Mountain Planning Region consist of the San Bernardino and San Gabriel Mountain ranges; and 3) the Desert Planning Region includes all of the unincorporated area of the County lying north and east of the Mountain Planning Region. Regional Policies have been tailored and formulated to address specific issues presented in each Planning Area. Elements of the Proposed Project traverse the Valley and Mountain Planning Regions. The plan does not address specific conservation goals and policies for the Valley Planning Region. Goals for the Mountain Planning Region include preserving the unique environmental features of the Mountain Region including native wildlife, vegetation and scenic vistas and maintaining the health and vigor of the forest environments. Policies aimed at meeting these goals encourage the protection of biological resources through development direction and resource conservation.

Western Riverside County Multiple Species Habitat Conservation Plan (2004). The MSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on conservation of species and their associated habitats in western Riverside County. Federal and State wildlife agencies approved permits required to implement the MSHCP on June 22, 2004. Implementation of the plan will contribute to the overall goal of the MSHCP Conservation Area, which consists of approximately 500,000 acres of habitat, including land already in public or quasi-public ownership and approximately 153,000 acres of land in private ownership that will be purchased or conserved through other means. The money for purchasing private land will come from development mitigation fees as well as State and federal funds.

The MSHCP provides a streamlined pathway for environmental review and permitting processes for projects that affect biological resources. This is accomplished through established survey and analysis requirements that directly support the identified conservation goals of the MSHCP and that lead to development of a comprehensive biological resources reserve system that provides conservation of biological resources in perpetuity. The overall benefit to a project proponent is the streamlined forms of mitigation and State and Federal Endangered Species Act take authorizations.

According to the MSHCP, SCE is considered to be a Participating Special Entity (PSE). Take authorization is granted to a PSE provided they comply with the requirements set forth in Section 11.8 of the MSHCP Implementing Agreement. These requirements include the following:

- An application containing a detailed description of the proposed activity
- A map indicating the location of the proposed activity
- An analysis of its potential impacts to Covered Species and their habitats and the MSHCP Conservation Area
- The results of survey and mapping as required pursuant to Section 6.3 of the MSHCP

- A fee paid in the amount of 3 to 5 percent (3-5%) of total capital costs or take such other actions as may be agreed to by the RCA and the Wildlife Agencies

SCE may also participate as a developer by obtaining certain required permits from the County and/or other MSHCP signatories and pay development fees. According to Section 8.5.1 of the MSHCP Plan, “Government Code Section 66000 et seq. allows cities and counties to charge new Development for the costs of mitigating the impacts of new Development. The Cities and County would implement a Development Mitigation Fee pursuant to the MSHCP; this fee would be one of the primary sources of funding the implementation of the MSHCP... A fee of approximately \$1,500 per residential unit (or an equivalent fee per acre) and \$6,131 of commercial or industrial Development was used in the revenue projection...” If SCE chooses to waive its status as a PSE and participate as a developer, then additional MSHCP requirements may apply, including associated Cell Criteria.

SCE will be acquiring coverage under the MSHCP by participating as a developer and obtaining the required permits from the County of Riverside and the cities of Banning and Beaumont. As previously mentioned, the Proposed Project is contained within identified Criteria Areas. As required by the MSHCP, a Habitat Evaluation and Acquisition Negotiation Strategy (HANS) application will be required for those portions of the Project that occur within MSHCP Criteria Cells. According to Section 6.1.1 of the plan, “the HANS Process applies to property which may be needed for inclusion in the MSHCP Conservation Area or subjected to other MSHCP Criteria and shall be implemented by the County and those Cities that have agreed to implement the HANS process... The Process ensures that an early determination would be made of what properties are needed for the MSHCP Conservation Area, that the owners of property needed for the MSHCP Conservation Area are compensated, and that owners of land not needed for the MSHCP Conservation Area shall receive Take Authorization for Covered Species Adequately Conserved through the Permits issued to the County and Cities pursuant to the MSHCP.”

City of Banning General Plan (2006). Goals, policies, and programs set forth by this plan are designed to ensure the long-term preservation of biological resources for the benefit of the entire community. The primary goal of the biological resource element of the plan is to establish a pattern of community development that supports a functional, productive, harmonious, and balanced relationship between the built and natural environment. Specific policies are directed towards the preservation of habitat for endangered, threatened, and sensitive species; evaluation of project impacts on existing wildlife and habitats; the establishment of wildlife corridors; and, the protection of biodiversity.

City of Beaumont General Plan (2007). This plan requires the assistance in the protection of biological resources, including sensitive biological habitats within the Planning Area. The plan requires coordination and cooperation with landowners and government agencies to promote development concepts that are sensitive to the environment and give maximum consideration to the preservation of natural habitats and to identify areas within the Planning Area that should be preserved as open space for passive recreation, resource management, or public safety. The plan will also encourage the protection of existing wildlife in the conservation areas located in the southerly portion of the Planning Area.

City of Calimesa General Plan (1994). This plan implements policies towards the conservation and protection of significant stands of mature trees, native vegetation, and wildlife habitat within the planning area. The plan encourages the use of buffers, creative site planning, and revegetation and open space easements/dedications to conserve and protect sensitive biological resources and habitats. The plan also requires the preparation of biological assessments for projects located in areas that may contain important plant and animal communities.

City of Redlands General Plan (Amended 1997). This plan requires the preservation of biotic resources towards contribution to the preservation of open space within its Planning Area. Guiding policies in the plan include: the minimization of disrupting wildlife and valued habitat; the preservation, protection, and enhancement of natural communities of special-status; recognition of the links between biotic resources in discrete locations throughout Redlands; the preservation, protection, and enhancement of wildlife corridors connecting the San Bernardino National Forest, Santa Ana River Wash, Crafton Hills, San Timoteo/Live Oak Canyons, the Badlands, and other open space areas; the preservation, restoration, protection, and enhancement of riparian corridors; and the landscaping of public areas with native vegetation.

City of Yucaipa General Plan (2004). This plan requires the preservation of the City's "rural atmosphere". The plan encourages development which is environmentally sensitive and preserves major landforms, sensitive habitat and biological resources, as well as other natural resources. Specific goals include preservation of rare and endangered species, protection of areas of special habitat value, and conservation of existing populations of native plant and wildlife species.

D.4.3 Significance Criteria

The following significance criteria are based on the CEQA environmental checklist presented in Appendix G of the CEQA Statutes and Guidelines and are used to describe the potential impacts of the Proposed Project and alternatives on the sensitive biological resources that may occur in the Proposed Project area. All direct, indirect, short-term, and long-term impacts associated with the Proposed Project and Project alternatives are assessed within Sections D.4.5 through D.4.8.

A project would have a significant adverse environmental impact on biological resources if it would:

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS.
- Have an adverse effect, either directly or through habitat modifications, on any species listed as endangered, threatened, or proposed, or critical habitat for these species.
- Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG, USFWS, or USDA Forest Service.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances or conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP.

D.4.4 Applicant-Proposed Measures

This section presents the Applicant-Proposed Measures (APMs) designed by SCE to reduce impacts to biological resources. These APMs are incorporated into the Project description and are considered part of the Proposed Project and, as applicable, each alternative. APMs are separate from mitigation measures, which are proposed in addition to the Project description for the purpose of mitigating significant impacts. If the Proposed Project or an alternative is approved, these measures in addition to

the mitigation identified in the EIR will be monitored by the CPUC. Table D.4-5 presents a list of the APMs related to biological resources.

Table D.4-5. Applicant-Proposed Measures – Biological Resources	
Measure Number	SCE-Proposed Measure
APM BIO-1	<p>SCE would reduce impacts to sensitive habitat by avoiding grading or other ground disturbing activities near sensitive habitats to the greatest extent possible. However, where this is not feasible, environmentally sensitive areas such as rare plant populations or specific breeding habitat would be identified in the field to minimize the possibility of inadvertent encroachment using the following avoidance and mitigation measures:</p> <ul style="list-style-type: none"> • Flagging or otherwise marking sensitive plant species so construction crews would avoid direct or indirect impacts to these areas. Construction personnel shall be instructed to avoid intrusion beyond these marked areas. • Monitor the known locations of special-status plant populations that might be found prior to or during the construction period, using a trained professional botanist. Monitor while construction is taking place in the vicinity of the special-status plant populations and for one year following construction to assess the effectiveness of protection measures. • Fencing construction limits that are adjacent to sensitive biological resources. Temporary fencing would consist of t-posts with orange barrier fence. Silt fences would also be included when construction occurs adjacent to streams.
APM BIO-2	<p>Causing the abandonment or removing active nests (with eggs or young) of any special-status or non-special-status migratory birds and raptors violates the State Fish and Game Code and the federal MBTA. To avoid this impact, SCE would implement one of the following:</p> <ul style="list-style-type: none"> • Conduct all construction activity (including vegetation pruning or removal) during the non-breeding season (generally between September 1 and January 31) for most special-status and non-special-status migratory birds; or • If construction activities are scheduled to occur during the breeding season (generally between February 1 and August 31), retain a qualified wildlife biologist to conduct pre-construction focused nesting surveys prior to vegetation trimming or removal activities. The biologist would monitor all work activities within these zones daily and assess their effect on the nesting birds. If the biologist determines that particular activities pose a high risk of disturbing an active nest, the biologist would recommend additional, feasible measures to minimize the risk of nest disturbance. If work activities are found to result in harm to nesting birds, destruction of an active nest, or nest abandonment prior to fledging, the SCE biologist would be notified and report the incident to the CDFG and USFWS.
APM BIO-3	<p>SCE would minimize noise through careful work scheduling and having properly functioning mufflers on construction vehicles. In addition, to the extent practicable, no project vehicles, chain saws, or heavy equipment would be operated within the exclusion zone until the nesting season is over or the biologist has determined that nesting is finished and the young have fledged. If it is not practicable to avoid work within an exclusion zone around an active nest, work activities modified to minimize disturbance of nesting birds may proceed within these zones. The biologist would monitor all work activities within these zones daily and assess their effect on the nesting birds. If the biologist determines that particular activities pose a high risk of disturbing an active nest, the biologist would recommend additional, feasible measures to minimize the risk of nest disturbance. If work activities are found to result in harm to nesting birds, destruction of an active nest, or nest abandonment prior to fledging, the biologist would report this to the CDFG and USFWS.</p>

Table D.4-5. Applicant-Proposed Measures – Biological Resources

APM BIO-4	<p>SCE would comply with all regulations and policies outlined in the MSHCP. This would include:</p> <ul style="list-style-type: none"> • The payment of Local Development Mitigation Fees and other relevant fees as set forth in Section 8.5 of the MSHCP or the purchase of conservation land. • Compliance with the HANS process or equivalent process to ensure application of the Criteria. • Compliance with the policies for the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, set forth in Section 6.1.2 of the MSHCP. This includes avoidance and minimization measures implemented in accordance with the species-specific objectives for those species. In the case of the least Bell's vireo, 90 percent of the occupied portions of the property that provide for long-term Conservation value for the vireo shall be conserved in a manner consistent with Conservation of the vireo. This would involve including 100 meters of undeveloped landscape adjacent to the Habitat conserved. • Compliance with the policies for the Protection of Narrow Endemic Plant Species set forth in Section 6.1.3 of the MSHCP. • Compliance with survey requirements as set forth in Section 6.3.2 of the MSHCP. • Compliance with the Urban/Wildlife Interface Guidelines as set forth in Section 6.1.4 of the MSHCP. • Compliance with the Best Management Practices and the siting and design criteria as set forth in Section 7.0 and Appendix C of the MSHCP. • The alignment for the proposed subtransmission line route currently passes through MSHCP Criteria Cells 936, 1032, and 1024 of The Pass Area Plan. The conservation goals for these cells are provided in the Biology Technical Report as a guideline for design criteria.
APM BIO-5	<p>Adequate dust control measures and best management practices (BMPs) would be instituted during earthwork to reduce harmful "edge effects" to sensitive resources in the Project area.</p>
APM BIO-6	<p>The cut slopes and constructed berms associated with the substation building pad would be revegetated with the appropriate native species subject to an approved revegetation plan.</p>
APM BIO-7	<p>Nocturnal lighting during construction and normal operation would be minimized on the approximate 14-acre substation site by using directional lighting to minimize any indirect impacts on the surrounding habitat, especially the riparian habitat associated with San Timoteo Creek shall be avoided.</p>
APM BIO-8	<p>Appropriate measures should be enacted to avoid accidental discharge of the water-based drilling fluid (i.e., a "frac-out") into San Timoteo Creek during the HDD under the creek for the two duct banks. Geotechnical investigations would be conducted to ensure that the boring would be situated at a depth such that there is no danger of the creek bed scouring down to the casings. HDD should be conducted during a period of low flow in the creek to reduce the potential impact of a frac-out. The HDD contractor would prepare and implement a frac-out plan to minimize the possibility of its occurrence and respond should one occur. Some possible measures that may be utilized in this plan would include, but not be limited, to the following:</p> <ul style="list-style-type: none"> • Require a full-time biological monitor to attend the HDD. • Require boring crews to strictly monitor drilling fluid preserves. • Provide containment equipment on site during construction activities associated with the HDD plan. Containment equipment shall include staked and floating silt barriers to isolate frac-out locations from flowing water. • Monitor waters downstream of the crossing site to quickly identify any seeps and immediately stop work if a seep is detected. • Prepare a contingency plan in the event that seeps are monitored in the stream. <p>In addition to the above mitigation measures, the HDD would adhere to the following in order to avoid additional permitting requirements:</p> <ul style="list-style-type: none"> • The directional bore would be at least eight feet below the channel to avoid impacts to the base flow of the stream. • All impacts to riparian vegetation would be avoided by placing bore pit outside of riparian habitat. • No resulting spoils or sediment would enter the waterway. • HDD would occur outside of the least Bell's vireo breeding season.
APM BIO-9	<p>Standard BMPs would be imposed to avoid siltation or other potential construction-related impacts on the drainage adjacent to the Zanja Substation.</p>
APM BIO-10	<p>Specific mitigation measures for impacts from the construction of the proposed southerly 115 kV transmission line route would be provided as the project footprint is finalized. Efforts would be made to minimize impacts from subtransmission line road improvement in sensitive habitat area to the maximum extent practicable. All construction activity and equipment would be limited to the access roads and spurs during the installation of the 115 kV line.</p>

APM BIO-11	Pre-construction surveys would be conducted along the subtransmission line access roads, proposed spur areas, and location of the four new fiber optic poles between transmission tower T-30 and the existing distribution poles. Surveys are intended to avoid disturbance to sensitive species with the potential to occur in the area, including special management plant species, Los Angeles pocket mouse, Stephens' kangaroo rat, and western burrowing owl. Impacts on suitable habitat for these species would be avoided to the extent practicable. If suitable habitat for these species is detected within impact areas, then surveys for these species are required under the MSHCP. Fees paid pursuant to the Riverside County Stephens' Kangaroo Rat Habitat Conservation Plan or MSHCP may be required if impacts on suitable Stephens' kangaroo rat habitat are unavoidable.
APM BIO-12	It is recommended that the proposed tower and construction staging area at the Mill Creek Communications Site are located in an area of disturbed or non-native grassland habitat to minimize impacts on special-status biological resources. Construction-related disturbance should be limited to existing dirt roads, developed lands, and areas of disturbed habitat. Impacts on undisturbed habitat, such as chaparral, shall be avoided to the extent feasible. If impacts on undisturbed habitat or existing trees are unavoidable, then rare plant surveys shall be conducted prior to vegetation clearing. Furthermore, vegetation clearing shall take place outside of the bird breeding season.
APM BIO-13	Obtain a Tree Removal Permit from the County of Riverside. The County of Riverside, Roadside Tree Ordinance 12.08 requires permits for tree removal within county highway ROWs (County of Riverside 2004). In addition, the County of Riverside requires that any future development in an identified sensitive vegetation area (including oak woodlands) must be evaluated individually and cumulatively for potential impact on vegetation (County of Riverside 1993). Mitigation would be coordinated, as required, with the appropriate public and resource agencies once tree removal permits or approvals for lost significant trees are obtained. Mitigation for lost trees may not be implemented within the ROW due to fire safety concerns, and instead may be implemented in an alternative, agency-approved location.
APM BIO-14	All subtransmission poles would be designed to be raptor-safe in accordance with the Suggested Practices for Raptors on Power Lines: State of the Art in 1996 (Avian Power Line Interaction Committee 1996).

D.4.5 Proposed Project Impact Analysis

D.4.5.1 Impacts and Mitigation Measures

The Proposed Project could result in temporary disturbance and/or permanent loss to sensitive vegetation communities, rare plant communities, and sensitive plant and animal species. Temporary disturbance includes short-term impacts during construction of proposed El Casco substation, the placement of new structures, the removal of existing wooden poles, construction of new access roads and improvements to existing access roads. The Proposed Project is currently expected to require pulling stations and splicing stations approximately every 10,000 feet (approximately 6 acres of temporary disturbance). Permanent loss involves long-term impacts associated with permanent Project features (e.g., new subtransmission towers and substation) that would remain throughout the life of the Project. Examples of activities that would result in impacts to sensitive biological resources include:

- Construction of a new 220/115/12 kV substation within the Norton Younglove Reserve (El Casco Substation), associated 220 kV and 115 kV interconnections, and new 12 kV line getaways;
- HDD Drilling under San Timoteo Creek;
- Replacement of approximately 13 miles of existing single-circuit 115 kV subtransmission lines with new, higher capacity double-circuit 115 kV subtransmission lines and associated support structures;
- Replacement of approximately 1.9 miles of existing single-circuit 115 kV subtransmission lines with new, higher capacity single-circuit 115 kV subtransmission lines and associated support structures;
- Replacement of approximately 0.5 miles of existing single-circuit 115 kV subtransmission lines with new, higher capacity single-circuit 115 kV subtransmission lines on existing support structures;

- Installation of telecommunications equipment at the proposed El Casco Substation and at SCE's existing Mill Creek Communications Site;
- Construction staging and laydown areas;
- Construction and improvement of access roads

Each of these activities would cause the removal of existing vegetation and disturbance of surface soils. In addition, permanent loss of habitat would occur where new tower or pole foundations are installed.

Surface disturbance could occur during construction, operation, and maintenance of the Proposed Project especially when vehicles are driven over existing vegetation that has not been intentionally and regularly cleared to maintain utility access roads. Impacts would be related to the following activities:

- Movement of equipment and Project personnel for monthly or annual Project maintenance;
- Movement of equipment and Project personnel during line-stringing/cable pulling

Each of these activities could cause temporary damage to existing vegetation, but would not likely involve removal or substantial disruption of surface soils. The most common type of surface disturbance is associated with rubber-tired or steel-tracked vehicles used to string/pull the line and transport personnel and materials along the Proposed Project ROW. Potential impacts to plant communities could also be caused by the movement of construction/maintenance vehicles and equipment within the Proposed Project subtransmission line ROW. Impacts could include soil compaction and crushing of vegetation.

D.4.5.2 Impacts to Riparian or Sensitive Natural Communities

Impact B-1: The Project would cause temporary or permanent loss of native vegetation communities (Class II).

Vegetation

Construction impacts to vegetation may occur in a variety of ways, including the direct removal of plants during the course of construction. As these impacts are generally localized and are primarily temporary in nature they are not usually considered significant unless the habitat type is regionally unique or is known to support sensitive species. Clearing and grading may also result in the alteration of soil conditions, including the loss of native seed banks and changes to the topography and drainage of a site such that the capability of the habitat to support native vegetation is impaired. Construction activities may also result in the creation of conditions that are favorable for the invasion of weedy exotic species that prevent the establishment of desirable vegetation and may adversely affect wildlife.

Depending on the site-specific topography, these impacts may extend beyond the ROW unless precautions are taken. For example the removal of vegetation adjacent to San Timoteo Creek or other ephemeral washes present in the Project area could result in soil erosion and the off-site transport of sediment into the creek. In addition, the removal of common native vegetation types, such as coastal sage or chaparral, creates possibilities for erosion or weed invasion that can affect habitat adjacent to the Project ROW.

The Proposed Project traverses a variety of both native and exotic vegetation communities. In some areas the Proposed Project would cross large areas of highly disturbed non-native/annual grassland and rural areas dominated by exotic forbs. Many of these areas already support clearly defined access roads and Project impacts would be minimal. These areas are also subject to heavy grazing pressure, particularly the region between SR-79 and the Banning substation site. Conversely, other areas support

high quality habitat including riparian communities at San Timoteo Creek and alluvial scrub in ephemeral washes such as Montgomery and Smith Creeks.

Nine broadly categorized vegetation communities (D.4.1.3.2 Vegetation Communities and Wildlife) are present in the Project area. These communities include:

- Southern mixed chaparral
- Scrub oak chaparral
- Chamise chaparral
- Riversidian sage scrub
- Riversidian alluvial fan sage scrub
- Southern riparian forest
- Southern willow scrub
- Non-native annual grassland
- Disturbed/ruderal areas

These communities occur at various locations across the ROW (Figures D.4-1a through D.4-1e) and would be subject to disturbance from Project construction. For example, construction of the El Casco Substation would result in the permanent removal of approximately 14 acres of vegetation. Substation construction would also result in temporary losses to vegetation. A summary of the vegetation impacts from the substation site are summarized below. Project activities would result in the permanent loss of approximately 15 acres and 28 acres temporary loss of vegetation. Table D.4-6 includes vegetation community types as described in the MSHCP.

Table D.4-6 Vegetation Impacts from the Proposed Project

Plant Community*	Substation and Access Road Permanent/Temporary (acres)	Subtransmission Line Permanent/Temporary (acres)	Total Acres
Coastal Sage Scrub	0.04/1.01	0.0/0.0	0.04/1.01
Riversidian Alluvial Fan Sage Scrub	0.01/0.17	0.0/0.0	0.01/0.17
Scrub Oak Chaparral	3.53/0.0	0.07/1.65	3.6/1.65
Grassland	0.99/0.0	0.19/4.82	1.18/0.36
Riparian Scrub Woodland, Forest	0.0/0.06	0.01/0.30	0.01/0.36
Developed/Disturbed Land	9.15/1.30	0.96/23.63	10.11/24.93
Project Total	13.72/2.54	1.23/25.58	14.95/28.12
*MSHCP vegetation community type			

One important factor in the analysis of impacts to both vegetation and wildlife in this region is the ongoing land use conversion occurring in and adjacent to the Proposed Project. During the course of routine biological surveys conducted over the last year it was noted that areas previously supporting open space had been converted to both residential and commercial development. Similarly, as described above, many areas of the ROW that would be subject to temporary disturbance support degraded or non-native habitats, including the substation site. While these areas remain important components of the landscape and are utilized by wildlife; construction activities would in many cases be short term and temporary. Loss of habitat is also tempered by the removal of the old towers. As proposed SCE would remove the existing H-frame and wooden poles and replace with the new light weight steel (LWS) and tubular steel poles (TSP). The new LWS and TSP result in very limited permanent ground disturbance (i.e. the width of the LWS pole and a three to six foot base for the TSP). These new poles would replace the existing structures virtually pole-for-pole, and overall impacts would be minor. The largest loss of vegetation would result from the construction of the El Casco substation, several 220 kV transmission structures used at turn locations, and areas subject to temporary disturbance from construction equipment.

The permanent loss of vegetation from implementation of the Proposed Project would be considered a significant impact (Class II) absent mitigation. To mitigate impacts from the Proposed Project SCE has developed specific APMs to reduce potential impacts to sensitive plant communities that occur in the Proposed Project area. For example, APM BIO-1 is intended to avoid disturbance to highly sensitive plant communities that may occur within the Proposed ROW. This includes avoiding tower locations where sensitive plants or plant communities occur and to locate towers outside of sensitive plant communities where possible. However, in some locations the proposed towers are located in ephemeral washes or riparian habitat. These impacts would be difficult to avoid and would result in a small but permanent loss of 0.001 acre of federal non-wetland waters and 0.043 acre of State jurisdictional habitat in San Timoteo and Montgomery Creeks. As required by law impacts to State or federal waters would require SCE to obtain permits for these activities (1602, 404, and 401) and comply with the provisions of the MSHCP regarding avoidance and minimization to riparian areas. Impacts to jurisdictional waters are discussed further in Section D.4.5.5.

SCE would also mitigate the loss of vegetation through the implementation of the MSHCP process. APM BIO-4 indicates SCE would comply with all regulations outlined in the MSHCP. Provided SCE complies with the Best Management Practices identified in the MSHCP (Volume 1-Appendix C of the MSHCP) and provides the appropriate fees, Project impacts to vegetation are mitigated. This process would require SCE to document the total acres of habitat subject to Project disturbance and provide fees that mitigate for the loss of covered habitats. In addition to the APMs proposed by SCE (APM BIO-1 and APM BIO-4) potential impacts to native vegetation would be reduced to a less-than-significant level through implementation of Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance).

Mitigation Measures for Impact B-1

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan. SCE shall prepare and implement a Habitat Restoration/Compensation Plan. The Plan shall include, but not be limited to, the following:

- Restore all areas disturbed by Project construction, including temporary disturbance areas at the El Casco substation site, around structure construction sites, laydown/staging areas, temporary access and spur roads, and existing tower locations that are removed during construction of the Proposed Project.
- All grading activities at the proposed El Casco substation shall include topsoil salvage. Topsoil shall be removed, stockpiled on-site, and returned to the original site or used in habitat restoration activities elsewhere on the site.
- Where onsite restoration is planned for mitigation of temporary impacts to sensitive vegetation communities, SCE shall identify a qualified Habitat Restoration Specialist to be approved by the CPUC.
- Hydroseeding, drill seeding, or an otherwise proven restoration technique shall be utilized on all disturbed surfaces using a locally endemic native seed mix approved by the CPUC. The seed mix shall be consistent with the requirements of the MSHCP.
- The Plan shall include the applicable Best Management Practices identified in the MSHCP.
- For the permanent loss of riparian habitat, SCE shall mitigate at a minimum of 2:1 or as identified in the CDFG Streambed Alteration Agreement.

- The creation or restoration of all habitats shall be monitored for five years after initial planting, or until established success criteria are met, to assess progress and identify potential problems with the restoration site. Remedial activities (e.g., additional planting, weeding, or erosion control) shall be taken during the monitoring period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the five-year maintenance and monitoring period, monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise noted by the CPUC/CDFG.

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance. SCE shall provide copies of all approved permits (1602, 404, 401, 402, MSHCP, MSHCP HANS Process for Criteria Cells) prior to ground disturbance in any location requiring the aforementioned permits. SCE shall provide documentation to the CPUC demonstrating compliance with the MSHCP prior to the onset of any ground disturbance.

Impact B-2: The Project would cause loss of foraging or breeding habitat for wildlife (Class II).

Several vegetation communities present in the Proposed Project area (Section D.4.1.3.3 Sensitive Vegetation Communities) provide important foraging habitat for birds, small mammals, and reptiles. Some of the important foraging habitats present in the Project area include non-native grasslands, coastal sage scrub, and riparian habitats. Construction of the proposed El Casco substation would result in the largest single loss of foraging habitat for the Proposed Project. Installation of new tower locations would result in minimal habitat loss as the towers are small, are replacing existing towers, and temporary impacts from grading would be restored at the completion of construction. In addition, the cleared areas around the existing H-frame poles are as large as the proposed LWS and TSP footprints. Large numbers of raptors were observed at several locations along the proposed alignment and included several sensitive raptor species such as Cooper's hawk, merlin, and northern harrier, all California and MSHCP species of concern. Cooper's hawk was observed at the proposed El Casco substation site. Foraging habitat may also be lost in some of the small drainages that would be subject to Project disturbance. These areas are known to support several sensitive mammal species including the Los Angeles pocket mouse. Table D.4-4 contains a complete list of the sensitive wildlife that may forage in the Project area.

Temporary and permanent loss of native vegetation communities that provide foraging habitat for raptors or other sensitive wildlife would be considered a significant impact without mitigation. However, impacts to foraging habitat would be primarily temporary and raptors typically forage over wide areas. In addition, transmission and subtransmission line towers are often utilized by raptors, such as the Swainson's hawk, red-tailed hawk, and peregrine falcon, and they may improve the foraging opportunities for these species by providing roosting or nesting sites. Likewise, the permanent loss of habitat at the proposed substation site would reduce foraging opportunities for other local species including pocket mice, black-tailed jackrabbit, and coyote (MSHCP sensitive species). Although there are extensive open areas in the vicinity of the proposed substation that may provide foraging space for raptors known to nest in the adjacent San Timoteo Creek riparian corridor, the site is located on level ground that is not widely available in the area. Rodent densities, and thus foraging opportunities for carnivores and raptors may be elevated on flat ground compared to sloping terrain, due primarily to differences in soil type, soil moisture, and type and density of vegetation (L. Hunt, pers. observ.). Consequently, construction of the substation could cause a significant disruption of the foraging patterns of carnivores and raptors in this area absent mitigation.

The substation site is also located within important upland habitats located adjacent to the creek, and many semi-aquatic species (i.e. pond turtles, two-striped garter snakes, and amphibians) rely on these areas for completion of their life cycles and for refugia during flood events. For example, Burke and Gibbons (1995) found that nesting and terrestrial hibernation, both necessary stages of freshwater turtle life cycles, occurred exclusively outside of riparian borders delineated by federal protection. Holland and Bury (2003) studied 275 southwestern pond turtle nests and found that, in undisturbed habitats, nests averaged 150 feet from the water and ranged up to 1300 feet from the shoreline.

The proposed substation is also within the upland buffer adjacent to San Timoteo Creek. Riparian habitats and their vegetated uplands are important areas utilized by many semi-aquatic and riparian species guilds. However, in California more than 95 percent of riparian habitats that were present prior to European settlement have been severely degraded or destroyed (Smith, 1977; Katibah, 1984). Although riparian zones naturally account for a low percentage of the total landscape (often less than one percent), they typically accommodate a disproportionately high number of species and provide a larger degree of ecological function than surrounding upland areas (Fischer and Fischenich, 2000). Many aquatic and semi-aquatic species rely on adjacent terrestrial habitats to complete their life cycles (Semlitsch and Bodie, 2003; Spinks et al., 2003; Burke and Gibbons, 1995) and riparian vegetation provides necessary foraging and nesting habitat for many bird species (Rottenborn, 1999; Bolger et al., 1997).

As described for Impact B-1, impacts to vegetation communities and habitat utilized as foraging habitat by sensitive wildlife would be mitigated through the implementation of APM BIO-1 and BIO-4 and compliance with the provisions of the MSHCP. Through the participation in the MSHCP, impacts to habitat loss for Covered Species are mitigated through the acquisition of Core Areas within the proposed MSHCP implementation area (RCIP, 2003). Some species known to occur in the Project area are not covered by the MSHCP, and include raptors such as the white-tailed kite, a CDFG fully protected species. Loss of foraging habitat for this species would be considered significant without mitigation. However, the total acreage of permanent Project disturbance is low and riparian habitat utilized by this species for nesting would not be substantial (less than 0.043 acre). Implementation of Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) as described above for Impact B-1, would reduce Impact B-2 to a less-than-significant level (Class II) and no further mitigation is warranted.

Mitigation Measures for Impact B-2

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

Impact B-3: The Project would introduce non-native and invasive plant species (Class II).

Western Riverside County and the Proposed Project area have been subject to the expansion of exotic plant species for decades. The introduction of non-native plant species is a special concern for native plant communities and has become a common occurrence in ecosystems around the globe (Weber, 2003). Volume 1 Section 5.0 of the MSHCP indicates that many areas of the County are colonized by exotic plant communities and management action is proposed to reduce the potential for the expansion or continued colonization of invasive weeds. Non-native plants pose a threat to the natural processes of plant community succession, fire frequency, biological diversity and species composition. The survival of some populations of special-status species could be adversely affected by the success of an

introduced plant species. In areas subject to wildfires, which have recently occurred in the Project area, exotic plants can quickly out-compete natives and change the ecology of the system.

Non-native vegetation, including noxious and invasive weeds, is a common occurrence in many sections of the proposed ROW. This is particularly evident along the road margins near SR-79 and the urban-rural interface where yellow star thistle, Russian thistle, and exotic grasses are common. These areas are typically subject to higher levels of disturbance from routine road grading, parking, OHV use, and grazing, which provide ideal conditions for the spread of invasive plant species. Other large areas of non-native grassland are crossed by the Proposed Project in multiple locations. As the Proposed Project would temporarily remove habitat at each tower location there is a potential for the introduction or spread of non-native plant species. This impact would be closely associated with the construction of the Proposed Project, but would also continue to occur during the operation and maintenance phases of the Proposed Project. The introduction of non-native or noxious weeds would be related to the use of vehicles, construction equipment, or earth materials contaminated with non-native plant seed, use of straw bales or wattles that contain seeds of non-native plant species, or the spread of invasive plants from one section of the ROW to another.

Another important factor is the potential spread of exotic plant species to riparian corridors. Many plant species utilized in landscaping can be invasive and spread to adjacent wildlands. Exotic vegetation has been demonstrated to be more abundant in riparian habitats that are in close proximity to urbanized areas. Studies have shown that riparian bird species richness and density tend to be negatively correlated with exotic vegetation abundance, presumably because exotic plant assemblages fail to provide the necessary structural and nutritional resources that native plant communities provide (Rottenborn, 1997 and 1999; Mills et al., 1989; Anderson et al., 1977). Urbanized areas tend to support higher concentrations of common disturbance-following species that often displace local species dependent of riparian habitats (Kreivia et al., 1993). The spread of exotic landscaping species from the proposed El Casco substation site would be considered a significant impact absent mitigation (Class II).

Although the region currently supports wide populations of noxious weeds, the introduction of new species not currently present in the region or the spread of noxious plant species across the ROW would be considered a significant impact absent mitigation. The introduction and spread of non-native plant species normally occurs when vehicles or equipment exposed to populations of noxious weeds in one geographic area inadvertently transport the seeds to another area where lands have been disturbed. Implementation of Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-3a (Implement Weed Control Measures), and B-3b (Landscape with Native or Non-invasive Plant Species) would reduce potential impacts from the introduction of non-native plant species to a less-than-significant level (Class II).

Mitigation Measures for Impact B-3

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-3a Implement Weed Control Measures. SCE shall ensure that all vehicles and large equipment utilized on the Project have been washed prior to commencing work on the Proposed Project. This includes wheels, undercarriages, bumpers and all parts of the vehicle. SCE shall keep a written log documenting that vehicles have been cleaned prior to use on the project. Once equipment and vehicles have been staged on the job site no further washing would be required unless the vehicles or equipment are exposed to populations of noxious weeds present on the site.

B-3b Landscape with Native or Non-invasive Plant Species. SCE shall ensure that all landscape plants utilized at the El Casco substation are not considered invasive by the California Invasive Plant Council (CAL-IPC). Plant species shall be utilized that have a low likelihood of spreading to the adjacent riparian corridor and require minimal watering.

Wildlife

Direct impacts to wildlife that could occur as a result of the Proposed Project include the removal of vegetation and subsequent temporary loss of wildlife habitat. In addition, construction activities would result in the displacement and/or potential mortality of resident wildlife species that are poor dispersers such as snakes, lizards, and small mammals. Construction may also result in the temporary degradation of the value of adjacent native habitat areas due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. Indirect impacts may include the increased human presence and the loss of habitat through the colonization of noxious weeds. The location of the proposed El Casco substation site is immediately adjacent to San Timoteo Creek which supports a variety of both common and sensitive wildlife species. Depending on the timing and location of Project activities, construction may also result in temporary disruption along terrestrial and riparian wildlife movement corridors crossed by the Proposed Project.

Impact B-4: The Project would result in a loss of nesting birds (Class II).

The Proposed Project contains suitable foraging and nesting habitat for both resident and migratory birds. Some of these areas include the oak scrub and chaparral dominated hills south of the proposed El Casco substation; Riversidean coastal sage scrub habitats present in Banning; the non-native grasslands present at the proposed substation site and open areas between the Maraschino and Banning substations; and the riparian habitat located in San Timoteo Creek.

As described above, ground-disturbing activity including construction of the substation and the placement of LWS and TSPs has the potential to disturb vegetation utilized by wildlife, including nesting birds. Helicopter noise associated with the placement of the new microwave tower at the Mill Creek site could also disrupt breeding birds. With the exception of a few non-native birds such as European starling, any active nest of a native bird is fully protected against take pursuant to the Migratory Bird Treaty Act (MBTA) and relevant CDFG Codes. Impacts to nesting birds could occur if construction activities disrupt habitat utilized for nesting or construction activity results in abandonment of the nest.

The Proposed Project may also impact raptors that utilize the existing towers for nesting and burrowing owls that frequent the edges of agricultural fields, existing roads, and irrigation canals for wintering or breeding habitat. These birds may abandon their nests if construction activities occur in close proximity to the nests. Displacement of native birds, raptors, or burrowing owls during the breeding season would be considered a significant impact (Class II) without mitigation.

Through SCE's participation in the MSHCP, impacts to most nesting birds would be mitigated. The MSHCP provides coverage for select species which includes take authorization through the MBTA (RCIP, 2003). The MSHCP indicates that "the Section 10(a) Permit shall constitute a Special Purpose Permit under 50 Code of Federal Regulations section 21.27, for the Take of Covered Species Adequately Conserved listed under FESA and which are also listed under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712) ("MBTA"), in the amount and/or number specified in the MSHCP, subject to the terms and conditions specified in the Section 10(a) Permit. Any such Take will not be in violation of the MBTA. The MBTA Special Purpose Permit will extend to Covered Species Adequately Conserved listed under FESA and also under the MBTA after the Effective Date of

the Section 10(a) Permit. This Special Purpose Permit shall be valid for a period of three (3) years from its Effective Date, provided the Section 10(a) Permit remains in effect for such period. The Special Purpose Permit shall be renewed pursuant to the requirements of the MBTA, provided the Permittees remain in compliance with the terms of this Agreement and the Section 10(a) Permit. Each such renewal shall be valid for a period of three (3) years, provided that the Section 10(a) Permit remains in effect for such period.”

Table D.4-4 contains a list of the species considered adequately conserved by the MSHCP. To further reduce potential impacts to nesting birds and raptors, SCE would implement APM BIO-2 which requires scheduling major ground disturbance outside the breeding season for nesting birds (generally between September 1 and January 31). However, it is likely that construction activities would occur in various off-road locations during the breeding season for some species not covered by the MSHCP. One species which is not covered by the MSHCP is the Swainson’s thrush (*Catharus ustulatus*), a California Species of Special Concern (CSC). This species has been observed in the San Timoteo riparian corridor. SCE has indicated that measures identified in APM BIO-2 including monitoring and avoidance would reduce impacts; however, there is still a potential for take to occur. To reduce impacts to less-than-significant levels Mitigation Measure B-4 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) is recommended. Implementation of this Mitigation Measure would ensure that violation of the MBTA does not occur and would reduce impacts to nesting birds to a less-than-significant level (Class II).

Mitigation Measure for Impact B-4

B-4 Conduct Pre-Construction Surveys and Monitoring for Breeding Birds. SCE shall conduct protocol-level surveys for nesting birds if construction activities are scheduled to occur during the breeding season for raptors and other migratory birds. Surveys shall be conducted in areas within 500 feet of tower sites, laydown/staging areas, substation sites, and access road/spur road locations. If active nests are found, a biological monitor shall establish a 300-foot buffer around the nest and no activities will be allowed within the buffer until the young have fledged from the nest or the nest fails. The biological monitor shall conduct regular monitoring of the nest to determine success/failure and to ensure that Project activities are not conducted within the 300-foot buffer until the nesting cycle is complete or the nest fails. The biological monitor shall be responsible for documenting the results of the surveys and the ongoing monitoring. The 300-foot buffer may be adjusted to accommodate environmental conditions (background noise, existing level of disturbance, nest location) with the approval of the CPUC monitor and the CDFG.

Impact B-5: The Project would result in permanent disturbance to wildlife at the proposed El Casco Substation site due to noise and increased human presence (Class II).

Construction and operation of the El Casco Substation would create and maintain disturbance conditions that could degrade the function of habitat linkages associated with the San Timoteo Creek riparian corridor and existing open space within and around the Norton Younglove Reserve. The Proposed Project substation site is located within 150 feet of San Timoteo Creek (Figure B-3b, Project Description) and would be subject to noise, ambient light, vehicle traffic, and human movement associated with the construction and operation of the proposed substation. These activities may deter birds and other wildlife from using the general area around the substation.

Urbanization typically impacts rivers and adjacent habitat by effectively destroying habitat that supports the highest bird species richness and the largest number of rare bird species in a watershed (Rottenborn,

1999). Rottenborn (1997) also showed that the proportion of native versus exotic vegetation and the level of development surrounding a riparian plot were closely associated with the abundance and distribution of riparian birds in the Santa Clara Valley in central California. Urbanization and the resultant noise and human presence can result in a decrease in the use of a site by native birds. While the removal of riparian or upland habitat obviously displaces birds and other species, urbanization also affects adjacent intact remnants of riparian habitat (Green and Baker, 2002). Generally, the closer a plot was to developed areas, the lower the species richness and the densities of individual species were. “Developed areas” in this study included buildings, bridges, roads, and other artificial surfaces. A few urban-adapted species, such as mourning dove and northern mockingbird, were positively correlated with urbanization, but most species were negatively correlated.

Noise from the proposed substation may also affect the use of the creek by riparian bird species including southwestern willow flycatcher, least Bell’s vireo, yellow-billed cuckoo and other neotropical migrants. Reijnen et al. (1995) demonstrated that for two species of European warbler (*Phylloscopus* spp.), sound levels between 26 dBA and 40 dBA reduced breeding density by up to 60 percent compared to areas without disturbance. In addition, while current sound thresholds for most birds in California is considered to be approximately 60 dBA, this level may actually still adversely affect breeding success for Least Bell’s vireo and southwestern willow flycatcher. Haas (pers. comm., 2007) indicated that in 1999, sound levels were recorded at 87 locations containing similar habitat conditions in the vicinity of the San Luis Rey River, the most robust and stable colony of flycatchers in California. Data indicate that noise levels were the single most important factor for occupancy. Ninety percent of territories were occupied at levels of 49 dBA, 75 percent at 51 dBA, 50 percent at 53 dBA, 25 percent at 55 dBA, and no territories were occupied at 60 dBA (Haas pers. comm., 2007). These data suggest that disturbance from adjacent road noise and urban development may be a contributing factor in the use of habitat adjacent to developed areas.

New sources of light from the substation could also adversely affect wildlife such as nesting birds or foraging mammals near San Timoteo Creek. Lighting may disrupt migratory movement, increase the potential for bird strikes, or increase predation risks. APM BIO-7 indicates that nighttime lighting would be minimal and directional lighting would be installed at the facility. Similar to other stations, SCE may propose motion-activated lighting to illuminate the locked gate at night. Motion-activated lighting can be triggered by animals as well as maintenance vehicles, and therefore, would create adverse lighting effects in the nighttime landscape even when no maintenance vehicle is present. The presence of nighttime lights at the substation may result in the disruption of nocturnal wildlife and would be considered a potential significant impact without mitigation (Class II).

The Proponent’s Environmental Assessment (PEA) and other supporting documents describe existing ambient noise levels within and adjacent to the substation site as high, due to frequent train traffic along an existing railroad ROW that parallels San Timoteo Creek within a few hundred feet of the site. In addition, road traffic routinely occurs immediately adjacent to the creek in this location from San Timoteo Canyon Road. As such both lighting and noise levels at the site are relatively high when compared to less-traveled sections of San Timoteo Creek. Surveys of the proposed substation site and adjacent habitat verified elevated noise levels during field visits conducted during the analysis of the Proposed Project (See Section D.4.1.2, Survey Methodology). Although potentially significant, impacts to wildlife in or near the proposed substation site from noise, lighting, and human disturbance would be fully mitigated through compliance with the MSHCP, the implementation of APMs, and Mitigation Measures identified in this EIR. By providing the MSHCP development fee (Section D.4.1.3.1 Special Habitat Management Areas Overview – Western Riverside County MSHCP) SCE would mitigate impacts to species by the acquisition of mitigation land within the MSHCP Core Area. To further reduce impacts to wildlife Mitigation Measures B-1b (Provide Documentation of Regulatory Permit

Acquisition and MSHCP Compliance), B-4 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds), B-5a (Reduce Noise Levels during Construction), B-5b (Use Magnetic Coils at Entrance Gate), and B-5c (Use Shielded Lighting and Schedule Daylight Maintenance) are recommended. Although adverse, these impacts would be reduced to less-than-significant levels (Class II).

Mitigation Measures for Impact B-5

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-4 Conduct Pre-Construction Surveys and Monitoring for Breeding Birds.

B-5a Reduce Noise Levels during Construction. SCE shall ensure that all heavy equipment install and maintain mufflers or other noise-reducing features when working at the substation site. SCE shall monitor and log sound levels at the edge of the riparian corridor and ensure noise levels do not result in a disruption to nesting birds. If construction noise is adversely affecting nesting birds subject to protection by the MBTA or State and federally listed species, work shall cease (unless authorized through the context of a Biological Opinion) until adequate sound barriers can be constructed to reduce noise levels at the edge of the riparian corridor. The CPUC and USFWS shall approve any sound barriers utilized at the Project site. Construction activities shall be limited to daylight hours, between 0700 and 1700 hrs.

B-5b Use Magnetic Coils at Entrance Gate. Instead of motion-activated lighting, SCE and its Contractors shall install magnetic coils, or other technology, in the entrance road to each transition station to activate low-level, directional lighting at the locked entrance gate.

B-5c Use Shielded Lighting and Schedule Daylight Maintenance. SCE shall use low-level shielded lighting at the El Casco substation site in order to illuminate equipment areas within the substations. Shielded lighting shall be installed to limit spill-over glare and nighttime sky-lighting. The brightness of station lighting shall be kept at levels consistent with health and safety requirements. SCE shall ensure that routine maintenance and repair activities are only conducted during daylight hours.

D.4.5.3 Impacts to Endangered or Threatened Species, or Proposed or Critical Habitat

Vegetation

Western Riverside County supports a variety of State and federally listed plant species some of which have the potential to occur in the project region (Table D.4-3). These include Munz's onion, Nevin's barberry, Mojave tarplant, slender-horned spineflower, and Santa Ana River woolly star. The Mill Creek site has the potential to support several rare plant species. Other sensitive plant species identified in Table D.4-3 are present in the Project region but have a very low potential to occur in the Project ROW because of habitat requirements such as soil conditions, moisture or disturbance regime, or elevational ranges. As described in Section D.4.1.2, focused surveys for rare plant species were conducted by SCE in the spring/summer of 2005, 2006, and 2007 and reconnaissance level surveys by Aspen biologists in May and June 2007. In addition, many sections of the ROW have been recently surveyed for other projects referenced in Section D.4.1.1.

Neither State nor federally listed plant species were identified within the Proposed Project area during the surveys conducted by SCE or Aspen. While the 2006/2007 rain year resulted in very poor or non-

existent plant expression in some areas; plant expression was adequate and many annual plants in the region flowered during the 2005/2006 rain year. Although listed plant species were not observed and numerous surveys have been completed in the Project ROW, there remains a potential for some sensitive plants to occur. With the exception of Nevin's barberry, most of the remaining species are difficult to identify when not in bloom. Nevin's barberry is a conspicuous evergreen shrub that occurs in chaparral and coastal sage scrub habitat and can be detected at any time of year because it does not require a flowering structure for positive identification.

Many areas of the Proposed Project have been subject to routine intense grazing pressure for several years which may limit the detection or presence of sensitive plants. Likewise some areas are routinely subject to OHV use and ongoing urbanization. However, there remain suitable pockets of habitat in several locations within the ROW that could support listed plants.

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class II).

Ground-disturbing activity associated with the Proposed Project has the potential to disturb either individual plants or populations of listed plant species should they be present in the Project area. The loss of listed plant species would occur from the construction of the proposed substation site, the placement of LWS and TSPs, grading of new access roads, maintenance of construction equipment and supplies, staging of equipment and materials, and use or improvement of existing access roads.

To reduce potential impacts to listed plant species SCE would implement a series of measures including APM BIO-1 which would require crews to flag and avoid direct or indirect impacts to sensitive plant species and to monitor these areas during construction to ensure construction personnel avoid these resources. This measure also requires SCE to monitor the special-status plant populations for one year following construction to assess the effectiveness of protection measures. SCE would also implement APM BIO-4 which requires SCE to comply with the MSHCP regarding narrow endemic plant species. Most of the Proposed Project area is located in the Narrow Endemic Plant Survey Area 8, which requires specific survey and avoidance criteria. In compliance with the MSHCP, SCE completed focused habitat suitability assessments for the following rare plants:

- Yucaipa onion
- Many-stemmed dudleya
- Nevin's barberry
- Round-leaved filaree
- Smooth tarplant

While not all of these plants are State or federally protected, these surveys were completed as part of the MSHCP compliance process. Additionally, SCE is required to avoid impacts to 90 percent of those portions of the property that provide for the long-term conservation of a Covered Species. The MSHCP also states that "if it is determined that the 90 percent avoidance threshold cannot be met and achievement of overall MSHCP conservation goals for the particular species have not yet been demonstrated, the Permittee(s) must make a Determination of Biologically Equivalent or Superior Preservation" (as described in Volume 1 Section 6.1.3 Protection of Narrow Endemic Plant Species)." However, the Proposed Project is not expected to result in the take of any listed plant species. Implementation of the APMs described above and the implementation of Mitigation Measure B-6 (Conduct Surveys for Sensitive Plant Species and Flag for Avoidance) would ensure impacts to listed plants remain less than significant (Class II).

Mitigation Measure for Impact B-6

B-6 Conduct Surveys for Sensitive Plant Species and Flag for Avoidance. SCE shall conduct focused surveys prior to construction during the floristic period appropriate for each of the sensitive plant species identified in Table D.4-3 with the potential to occur within the Project ROW *and* within 100 feet of all surface-disturbing activities. Populations of sensitive plants shall be flagged and mapped prior to construction. If sensitive plants are located during the focused surveys, then modification of the placement of structures, access roads, laydown areas, and other ground-disturbing activities would be implemented in order to avoid the plants. If listed plant species or species requiring 90 percent avoidance by the MSHCP cannot be avoided, SCE shall avoid the plants until authorized to proceed through the context of a Biological Opinion and authorized through the MSHCP Determination of Biologically Equivalent or Superior Preservation process.

Wildlife

Section D.4.1.3.5 identified a total of nine listed wildlife species either directly observed in the Project area or with a moderate to high potential to occur in the Proposed Project area. Species that were considered to have a low probability or unlikely to occur have not been carried forward for analysis in this EIR. Some of the listed species observed in the Project area include southwestern willow flycatcher, northwestern willow flycatcher, least Bell's vireo, western yellow-billed cuckoo, and peregrine falcon. Table D.4-4 contains a list of all the sensitive wildlife likely to occur in the Proposed Project area. Although San Bernardino kangaroo rat and Stephens's kangaroo rat have some potential to occur in the region, suitable habitat for these species is not present in the Project area and focused trapping for small mammals did not detect these species in the Project area (Appendix 4.1). Critical habitat for listed wildlife is not present in the Project area.

Impacts to listed species would occur in the same way as described for non-listed wildlife in Section D.4.5.1 and could be caused by a variety of direct and indirect factors. Direct impacts to wildlife would include the removal of vegetation and subsequent loss of wildlife habitat. Construction activities could also result in the displacement and/or potential mortality of wildlife that are poor dispersers such as snakes, lizards, and small mammals. Construction may also result in the temporary degradation of the value of adjacent native habitat areas due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. Indirect impacts may include increased human presence and the loss of habitat through the colonization of noxious weeds. Mortality or loss of reproductive success may also occur during land clearing, excavation, grading, and construction of the Proposed Project.

Impact B-7: Construction activities would result in indirect or direct loss of Quino Checkerspot habitat (Class II).

Invertebrates. There is no indication that any rare or listed invertebrates occur within the Proposed Project area. However, two listed species of fairy shrimp, Riverside fairy shrimp and vernal pool fairy shrimp, are known to occur in southwestern Riverside County but have not been documented in the Proposed Project area (Appendix 4.1). Vernal pool surveys conducted in 2007 did not detect this resource in the Project area and suitable soils for vernal pools are generally absent from the Project ROW. Therefore impacts to vernal pool brachiopods are not expected to occur.

Although not observed, potential habitat is present for the Quino Checkerspot butterfly within the Proposed Project area. If present, direct impacts to this species could occur through removal of host plants required by this species. Open-canopied habitats, such as sage scrub, chaparral, and grasslands,

with host plants, are considered suitable habitat. This is a fully Covered Species under the MSHCP and does not require focused surveys. The MSHCP monitors the take of this species through the documentation of habitat loss. As the Proposed Project is expected to permanently remove 13.73 acres of habitat potentially utilized by this species, and temporarily impact an additional 17.88 acres, impacts to this species would be considered significant absent mitigation (Class II).

Potential indirect effects to the species could occur from the spread of noxious or invasive weeds that degrade habitat utilized by this species. However, impacts to this species are considered fully mitigated through SCE's participation in the MSHCP. Implementation of APM BIO-4, which requires MSHCP compliance and Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), and B-3 (Implement Weed Control Measures) would reduce potential impacts to this species to a less-than-significant level (Class II).

Mitigation Measures for Impact B-7

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-3a Implement Weed Control Measures

Fishes. The proposed El Casco Substation is located adjacent to San Timoteo Creek, a semi-perennial watercourse that is a tributary to the Santa Ana River. Portions of this creek are known to support populations of the Santa Ana sucker, a federally and State protected fish. Populations of this species have not been detected in this section of San Timoteo Creek. In addition, downstream blockages and the potential intermittent activity of this section of the creek have likely precluded the presence of this species at the proposed substation site. Other sections of the Proposed Project ROW also contain several blue line drainages; however, these creeks are primarily intermittent or ephemeral and run in direct response to precipitation events. Therefore there is no indication that listed fish occur in the Proposed Project area.

Amphibians. Listed amphibians are not known to occur within the Proposed Project area. While arroyo toad and mountain yellow-legged frog are known to occur in the region, they do not occur in or adjacent to the Project area. Portions of San Timoteo Creek several miles from the Project area are known support suitable habitat for arroyo toad, but this species has not been documented near the Proposed Project. Focused surveys conducted by the San Bernardino County Museum did not detect the species upstream from the San Timoteo Canyon Road Bridge during the Devers to Palo Verde project completed in 2005. Reports of vocalizing male arroyo toads have been reported for the area downstream of Alessandro Road which is approximately seven miles downstream of the Proposed Project ROW. Focused surveys conducted during the 1999 breeding season did not detect this species near Alessandro Road. In addition, the subtransmission line spans San Timoteo Creek and construction would not occur in habitat where toads have been located. However, arroyo toads have been known to migrate up to 1.5 miles from any water source, to upland habitats for dispersal and in search of aestivation sites. Still, direct impacts to arroyo toad or suitable habitat for this species would be not be expected to occur and would be considered less than significant (Class III).

Surveys conducted of the Project area did not detect the presence of listed amphibian species. In addition, most of the segments of the Proposed Project do not fall within the range nor support the appropriate habitat requirements for any listed amphibian species that were determined to have the potential to occur. Construction of the Proposed Project would not result in significant impacts to listed

species of amphibians. In addition, the Proposed Project is not expected to impact designated Critical Habitat for listed amphibians. Although no sensitive amphibians were identified in this segment SCE would implement APM BIO-11 (Conduct pre-construction surveys) prior to construction. No additional mitigation is recommended at this time.

Reptiles. The Proposed Project is not known to support any listed reptiles. The closest location for listed reptiles is the dune areas of the Coachella Valley located outside the Project area. This area supports the Coachella Valley fringe-toed lizard and populations of desert tortoise. However, the Proposed Project area does not support the critical habitat features required by these species. Construction of the Proposed Project would not result in significant impacts to listed species of reptiles. In addition, the Proposed Project is not expected to impact designated Critical Habitat for listed reptiles. Although no sensitive reptiles were identified in the Proposed El Casco Project area SCE would implement APM BIO-11 (Conduct Pre-construction Surveys) prior to construction. No additional mitigation is recommended.

Birds. Several listed bird species have the potential to occur in or adjacent to the Proposed Project area. Most of the listed bird species are associated with the riparian habitat located at San Timoteo Creek and the upland areas utilized as foraging habitat by various raptor species. Coastal sage scrub communities located in the Project area may also support California gnatcatcher, although this species has not been recorded in the Project area. Riversidean sage scrub is patchily distributed within the Project area; north of SR-60 the sage scrub is disturbed and fragmented and therefore poorly suited to support potentially occurring sensitive avian species. Even smaller fragmented patches located south of SR-60 are less suitable. However, the California gnatcatcher may occur in several areas including fragmented patches of sage scrub adjacent to chaparral in near Frontage Road south of San Timoteo Canyon Road and west of I-10; the large, unfragmented area of sage scrub that occurs at Westward Road; and within patches of California buckwheat in the large arroyo east of Sun Lakes. Table D.4-4 contains the list of sensitive bird species documented to occur or likely to be present in the Proposed Project area. Some of the listed species that may occur include:

- Swainson's hawk
- Western yellow-billed cuckoo
- Southwestern willow flycatcher
- Northwestern willow flycatcher
- Peregrine falcon
- California gnatcatcher
- Least Bell's vireo

Impact B-8: The Project would result in habitat loss or disturbance to listed birds, including migratory birds and raptors (Class II).

Southwestern willow flycatchers, northwestern willow flycatchers, Western yellow-billed cuckoo, and least Bell's vireos were documented to occur in San Timoteo Creek immediately adjacent to the proposed substation site. While yellow-billed cuckoo were observed in the Project area, this species does not typically breed in habitat present in the Project area. This species typically utilizes extensive riparian forests. For example, one study found that yellow-billed cuckoos in the Sacramento Valley of California almost exclusively occupied areas where riparian vegetation exceeded 300 m wide (Gaines, 1974). However, for the purposes of this document it is assumed this species is present at least as a summer migrant. Peregrine falcon was observed along a portion of the ROW and California gnatcatchers, although not observed, have the potential to utilize coastal sage scrub habits in the Project area. The MSHCP tracks the loss of coastal sage scrub to monitor impacts to California gnatcatcher. As this species is covered by the MSHCP, focused surveys are not required (RCIP, 2003). Additionally, trees and in some cases, subtransmission towers in the Project area, especially the western portions of

the area and the Mill Creek Communications Site, are used as nest sites by one or more species of raptors. Other listed species, such as northwestern willow flycatchers and Swainson's hawks, are present in Project area as migrants or overwintering species.

Project activities would subject these species to the same types of impacts as described for nesting birds (Impact B-4). Ground-disturbing activity including construction of the substation and the placement of LWS and TSPs has the potential to disturb vegetation utilized by wildlife, including listed bird species. Helicopter noise associated with the placement of the new microwave tower at the Mill Creek site could also disrupt breeding birds.

Noise from the proposed substation may affect the use of the creek by riparian bird species including southwestern willow flycatcher, least Bell's vireo, yellow-billed cuckoo and other neotropical migrants. As discussed under Impact B-4, the Proposed Project would result in permanent disturbance to nesting birds at the proposed El Casco Substation site due to noise, lighting, and increased human activity. Noise and increased human presence, as well as removal/disturbance of vegetation during construction during the breeding season could result in the displacement of breeding birds and the abandonment of active nests. Disturbance could also extend to roosting and foraging habitat during spring/fall migration and during the winter. Breeding birds and other wildlife may temporarily or permanently leave their territories to avoid construction activity, which could lead to reduced reproductive success and increased mortality. This would result in significant impacts to listed birds in San Timoteo Creek absent mitigation.

Noise and increased human presence, as well as removal/disturbance of vegetation during construction would also have the potential to disrupt listed birds in other sections of the ROW. However, the total area of disturbance is very low and existing conditions along many sections of the ROW (i.e. urban development) limit the potential for many listed birds.

The listed bird species present in the Proposed Project area are currently considered Covered Species under the MSHCP. Through participation in the MSHCP, impacts to these species would be considered fully mitigated. However, to further reduce potential impacts to nesting birds and raptors SCE would implement APM BIO-2 which requires scheduling major ground disturbance outside the breeding season for nesting birds (generally between September 1 and January 31). To reduce impacts to less-than-significant levels for species not covered by the MSHCP, including California Fully Protected Species, Mitigation Measure B-4 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) is recommended. Implementation of this Mitigation Measure would ensure that impacts to listed birds are reduced to a less-than-significant level (Class II).

Mitigation Measure for Impact B-8

B-4 Conduct Pre-construction Surveys and Monitoring for Breeding Birds

Mammals

Two State or federally listed mammal species have limited potential to occur in or adjacent to the Proposed Project area, San Bernardino kangaroo rat and Stephens' kangaroo rat. To comply with the MSHCP survey requirement for these species, SCE conducted focused surveys for San Bernardino kangaroo rat and other small mammals in the Proposed Project area in 2007 (Jones & Stokes, 2007). This species was not documented in the Project area and the report concluded that Riversidean alluvial fan sage scrub in the Project area is too disturbed and fragmented to support this species. SCE indicated in the PEA that at least 14 acres of potentially suitable habitat for Stephen's kangaroo rat, a federally listed species, would be permanently disturbed by the Proposed Project. This habitat is mostly

associated with the proposed El Casco Substation. However, this species was not observed in the Project area and overall habitat conditions at the Project site are not favorable for its occurrence. While local CNDDDB reports have indicated this species is present in the Project region, these reports do not appear to be supported by the biological conditions currently present in the ROW and the region in general. Habitat conditions in the Project area are not suited for Stephen's kangaroo rat and this species is not expected to occur (Haas, 2007). However, because this species is fully covered under the MSHCP and surveys are not required, if present, activities that result in the loss of habitat would be fully mitigated through the MSHCP process.

While listed mammal species are not expected to occur in the Proposed Project area SCE would implement measures to reduce or avoid impacts to listed species. SCE would also implement AMP Bio-4 which would require compliance with the MSHCP. Under the MSHCP, impacts to these species, if present, would be fully mitigated through the existing development fee structure. Impacts to listed mammals would be further reduced through Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance). Mitigation Measure B-3a (Implement Weed Control Measures) would further reduce indirect impacts to listed mammals by reducing the potential for the propagation of noxious weeds.

Impact B-9: The Project would result in the electrocution of listed bird species (Class II).

Large, aerial-perching birds such as hawks and eagles are most susceptible to electrocution on power lines because of their large size, distribution, and proclivity to perch on tall structures that offer views of potential prey. The design of transmission poles or towers appears to be a major factor in raptor electrocution. Electrocution occurs when a perching bird simultaneously contacts two energized phase conductors or an energized conductor and grounded hardware. Electrocution can occur when horizontal separation is less than the wrist-to-wrist (flesh-to-flesh) distance of a bird's wingspan or where vertical separation is less than a bird's length from head-to-foot. Electrocution can also occur when birds perched side-by-side span the distance between these elements (APLIC, 2006).

The Proposed Project includes new 115 kV double-circuit lines that include energized phase conductors. The largest bird that could come in contact with these subtransmission lines is the bald eagle with a wingspan of up to 8 feet (wrist-to-wrist length of 2.8 feet) and height (head-to-foot) up to 2.3 feet (APLIC, 2006). The golden eagle has a wingspan of up to 7.5 feet (wrist-to-wrist length of 3.5 feet) and height up to 2.2 feet (APLIC, 2006). The great blue heron has a six-foot wingspan, and can be 3.8 feet tall, but these herons generally do not perch on subtransmission towers or lines. The red-tailed hawk is the most common large bird that could come in contact with the subtransmission lines and are widespread in the Banning area. The red-tailed hawk's wingspan is up to 4.7 feet (wrist-to-wrist length of 1.9 feet) and height up to 1.8 feet (APLIC, 2006). Other large birds that could in contact with the subtransmission lines are the turkey vulture (5.8-foot wingspan, two-foot wrist-to-wrist length, 1.8 feet tall) and great horned owl (4.3-foot wingspan, 2.1-foot wrist-to-wrist length, 1.3 feet tall) (APLIC, 2006). None of the wrist-to-wrist lengths (or even wingspans) or heights of these birds is long enough to simultaneously contact two energized phase conductors. If they were to roost communally, there is some potential that multiple birds would bridge the gap between two energized conductors. However, this would be difficult on a 115 kV subtransmission line and the likelihood of this happening would be low.

Golden eagles wintering in Idaho have been observed to roost communally on power line structures (APLIC, 2006) and turkey vultures have been observed doing the same (HELIX, 2006). Recent

extrapolations from various databases indicate that tens to hundreds of thousands of birds die each year in North America from power line electrocutions (Manville II², 2005). The majority of raptor electrocutions are caused by lines that are energized at voltage levels less than 69 kV (APLIC, 2006; Manville II², 2005). The Proposed Project's voltage level is 115 kV, so the likelihood of electrocution is low based on SCE's commitment to construct raptor-safe LWS and TSPs (see APM BIO-14). In addition, the Proposed Project would be constructed with minimum clearances between phase conductors or between phase conductors and grounded hardware, as recommended by APLIC (1996), that are sufficient to protect even the largest birds, and therefore would present little to no risk of bird electrocution. However, 1996 APLIC guidelines have been revised and updated (APLIC, 2006). Therefore, impacts would be considered less than significant with the implementation of Mitigation Measure B-9 (Construct to 2006 APLIC Guidelines) (Class II).

Mitigation Measure for Impact B-9

B-9 Construct to 2006 APLIC Guidelines. SCE shall conform to the latest practices (as outlined in the 2006 APLIC document) to protect birds from electrocution. Implementation of these guidelines shall be verified by the CPUC.

Impact B-10: The Project would result in subtransmission line collisions by listed bird species (Class II).

A primary issue with respect to birds and the Proposed Project is the collision hazard that subtransmission towers and lines present to birds. Bird collisions with power lines generally occur when: (1) a power line or other aerial structure transects a daily flight path used by a concentration of birds, and (2) migrants are traveling at reduced altitudes and encounter tall structures in their path (Brown, 1993). The Pass Area is a major regional migratory pathway for a wide variety of bird species, including raptors. During migration flights, especially during spring migration, strong winds and storms in the Pass Area are more likely to force birds to fly at relatively low altitudes. Most of this migration occurs at night, although raptors, swallows, kingbirds, and some other species typically migrate during the day. Eagles do not tend to be collision victims, except on the smaller distribution lines, because their eyesight is so acute (Wildlife Research Institute, 2007). Because most birds migrate at night and migration corridors have never been studied systematically, there is no way to know how many birds and what species of birds could actually be impacted by collision with Proposed Project subtransmission lines, towers, poles, or ground wires. Mortality due to collisions with Proposed Project features would be greatest where the movements of migrating birds are the most concentrated. The relatively low-elevation San Timoteo Canyon and San Gorgonio Pass area is a likely migratory pathway for birds, including raptors, moving between the desert/inland areas and coastal ranges.

Collision rates generally increase in low-light conditions, during inclement weather, such as rain or snow, during strong winds, and during panic flushes when birds are startled by a disturbance or are fleeing from danger. Collisions are more probable near wetlands, valleys that are bisected by power lines, and within narrow passes where power lines run perpendicular to flight paths. Passerines (i.e., songbirds) and waterfowl (such as ducks) are known to collide with wires (APLIC, 1994), particularly during nocturnal migrations or poor weather conditions (Avery et al., 1978). However, passerines and waterfowl have a lower potential for collisions than larger birds, such as raptors. Some behavioral factors contribute to a lower collision mortality rate for these birds. Passerines and waterfowl tend to fly under power lines, as opposed to larger species, which generally fly over the lines and risk colliding with the higher ground wires, and many smaller birds tend to reduce their flight activity during poor weather conditions (Avery et al., 1978).

It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the project vicinity. These data are not available for the proposed subtransmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest such as along waterways or over riparian areas like those San Timoteo Creek. The operation of the Proposed Project may result in mortality of listed or sensitive bird species and this would be considered a significant impact (Class II). However, most of the listed species present in the Project area are Covered Species under the MSHCP and impacts of the Proposed Project would be fully mitigated through compliance with the MSHCP. In addition, the proposed subtransmission line would replace existing lines and general conditions would not substantially change from existing conditions. While the new towers would be taller, the line would replace the existing line in the same area and be constructed utilizing line-collision avoidance technology. Implementation of Mitigation Measure B-10 (Utilize Collision-Reducing Techniques) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less-than-significant level.

Mitigation Measure for Impact B-10

B-10 Utilize Collision-Reducing Techniques. SCE shall install the subtransmission line utilizing APLIC standards for collision-reducing techniques as outlined in “Mitigating Bird Collisions with Power Lines: The State of the Art in 2006 (APLIC, 2006).”

D.4.5.4 Impacts to Candidate, Sensitive, or Special-status Species

Vegetation

Habitat present in the Proposed Project area has the potential to support a variety of sensitive plant species. Surveys conducted by SCE identified three rare plants occurring in or adjacent to the Project ROW. Smooth tarplant, a CNPS List 1B and MSHCP protected species, is present at the Proposed El Casco substation site, and Plummer’s mariposa lily has the potential to occur in portions of the proposed ROW and along the access road to the Mill Creek site. Cleveland’s bush monkey flower is also present in the foothills adjacent to the El Casco substation, but should not be impacted by Project construction.

Although not observed in the Project area several other rare plants have a moderate to high potential to occur in the Project region, including Parry's Spineflower, Chaparral Sand-verbena (*Abronia villosa* var. *aurita*), California Muhly (*Muhlenbergia californica*), Yucaipa Onion, Jaeger's Milk-vetch (*Astragalus pachypus* var. *jaegerii*), San Bernardino Aster (*Symphyotrichum defoliatum*), many stemmed dudleya, and mud nama (*Nama stenocarpum*). Potential impacts to sensitive plants would be the same as for threatened or endangered plant species as described in Section D.4.5.3.

Impact B-11: The Project would result in the loss of special-status plant species (Class II).

Construction-related impacts to sensitive plant species would be the same as described for Impact B-6 for listed plant species and would be considered significant without mitigation. Ground-disturbing activity, including construction of the El Casco substation, would result in the loss of approximately three smooth tarplants that occur within the construction footprint. Tower pad preparation and construction, tower removal, and use or improvement of existing access roads has the potential to disturb sensitive plant species in other areas. Indirect impacts can include the spread of noxious or invasive weeds.

The only known rare plant that would be subject to direct impacts is the smooth tarplant. Several other sensitive plant species may occur including many stemmed dudleya, although habitat conditions for this species are not ideal. However, the low levels of precipitation and heavy grazing pressure present in many areas may limit the ability to detect this species if present. Therefore, there is some potential for this and other rare plants to occur.

As identified above, three individual smooth tarplants, and likely a portion of the existing seed bank, would be subject to mortality from the construction of the new substation. In addition, SCE indicated in the 2007 technical report submitted by Jones and Stokes (Appendix 4.1) that a larger population of approximately 100 plants could be temporarily impacted. The smooth tarplant, while not a Narrow Endemic Plant Species, is a MSHCP Covered Species and is located within a Criteria Area. For locations with positive survey results for any species addressed in Section 6.3.2 of the MSHCP, such as the smooth tarplant; 90 percent of those portions of the property that provide for long-term conservation value for the identified species shall be avoided until it is demonstrated that conservation goals for the particular species are met. Findings of equivalency shall be made demonstrating that the 90 percent standard has been met. If it is determined that the 90 percent threshold cannot be met, a Determination of Biologically Equivalent or Superior Preservation must be prepared in accordance with guidelines set forth in Section 6.3.2 of the MSHCP.

Based on the small percentage of plants that would be subject to Project disturbance, and the fact that the species is a disturbance-following species, impacts to smooth tarplant would be mitigated through SCE's participation in the MSHCP (APM BIO-4) and Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), B-3a (Implement Weed Control Measures), and B-6 (Conduct Surveys for Sensitive Plant Species and Flag for Avoidance). Implementation of these measures would reduce impacts to sensitive plant species to a less-than-significant level (Class II).

Mitigation Measures for Impact B-11

- B-1a Prepare and Implement a Habitat Restoration/Compensation Plan**
- B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance**
- B-3a Implement Weed Control Measures**
- B-6 Conduct Surveys for Sensitive Plant Species and Flag for Avoidance**

Wildlife

Western Riverside County is known to support a broad diversity of sensitive wildlife species. Surveys of the Proposed Project also detected several species considered rare by the CDFG or that have been identified as declining by the MSHCP. Approximately thirty-two sensitive wildlife species have a high or moderate potential to occur due to the presence of suitable habitat or a known occurrence in the vicinity of the Proposed Project route (Table D.4.-4). Of the species identified in Table D.4-4, Twenty-one were directly observed in or adjacent to the Project area. The large majority of the observed species are birds, however several small mammals and reptiles were also observed. Some of these species include the coast horned lizard, Los Angeles pocket mouse, and black-tailed jackrabbit. Various songbirds and raptors such as Swainson's thrush, yellow warbler, Northern harrier, and Cooper's hawk were also observed. Although sensitive species have been observed in many sections of the El Casco subtransmission line route, the location and type of habitat that occurs in each specific area dictates the types of sensitive wildlife expected to occur. It is also important to note that as ongoing development

continues adjacent to the line many of the species observed during the previous surveys are likely to become less prevalent as foraging habitat is converted to changing land uses such as residential and commercial development.

Potential impacts to sensitive wildlife species would be similar to those discussed for listed wildlife species in Section D.4.5.3. The following discussion highlights construction impacts that would occur to specific sensitive wildlife species.

Impact B-12: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II)

Invertebrates. Sensitive invertebrate species were not observed along the Project route and are not expected to occur in the Proposed El Casco Project area. Consequently, impacts to sensitive invertebrates would be considered less than significant (Class III).

Fishes. Fish considered protected by the CDFG or MSHCP are not expected to occur in the Project area. Therefore, no impacts to sensitive fish species would occur.

Amphibians. The only special-status amphibian known to occur in the Project area is the western spadefoot toad. Museum records document the historical occurrence of spadefoots in the Project area, but surveys for the Proposed Project did not observe this species. Suitable breeding habitat occurs along the edges of several dry washes that would be traversed by the subtransmission line as well as on the stream terraces of San Timoteo Creek. Consequently, this species has a moderate to high potential of occurring in the Project area.

These pond-breeding amphibians inhabit upland habitats (grassland, oak savannah, chaparral, and coastal sage scrub) around these breeding sites and spend most of the year underground in burrows created and maintained by burrowing rodents (ground squirrels, pocket gophers, kangaroo rats, pocket mice, etc.). Spadefoots have been documented to occur well into upland habitats at least 1,000 feet from the nearest water source and 35 to 1,175 feet from the closest breeding sites (Hunt, 1998). Studies of tiger salamanders (*Ambystoma* sp.) have documented that a large segment of the breeding population (at least 20% of breeding adults) move between breeding sites that are within 0.5 to 1 mile of each other. This means that subpopulations and their breeding sites have to be interconnected by extensive, un-fragmented upland habitats for metapopulation stability and to prevent inbreeding (USFWS, 2005). While this information comes from studies of tiger salamanders, it is very likely that the western spadefoot toad exhibits similar movement ecology.

Spadefoot toads are a Covered Species under the MSHCP and impacts to this species are fully mitigated through APM Bio-4 (SCE Compliance with MSHCP Requirements) and B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance). Through compliance with these measures impacts, to spadefoot toads would be considered less than significant (Class II).

Mitigation Measure for Impact B-12

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance)

Impact B-13: The Project would result in the loss of special-status reptile species (Class II).

Reptiles. Alluvial fan scrub, coastal sage scrub, and chaparral communities are known to support numerous sensitive reptiles. In the Proposed Project area six sensitive reptile species have either been observed or have a high to moderate potential to occur. These include the coast horned lizard, silvery

legless lizard (*Anniella pulchra pulchra*), San Bernardino mountain kingsnake (*Lampropeltis zonata parviruba*), coast patched nose snake, two-striped garter snake, and orange-throated whiptail. Table D.4-4 identifies the species with the potential to occur in the Proposed Project area.

Construction activities conducted for the Proposed Project could result in the same type of impacts to the sensitive reptile species listed in Table D.4-4 as for listed species. With the exception of the San Bernardino mountain kingsnake, silvery legless lizard, coast patched nose snake, and two-striped garter snake, the remaining species with the potential to occur in the Project area are covered under the MSHCP and impacts would be mitigated through SCE's participation in the MSHCP program.

The San Bernardino Mountain king snake typically occurs in sunlit canyons with rocky outcrops. Suitable habitat for this species is present near the proposed Mill Creek site. This species is not expected to occur in the proposed subtransmission line route. The silvery legless lizard has a moderate to high potential to occur in sandy or loose loamy soils under sparse vegetation in drainages that occur throughout the alignment, including Smith and Montgomery creeks. Two-striped garter snake is a likely resident of riparian habitat associated with San Timoteo Creek. These species are often found in or adjacent to creeks, streams, and ponds and could be impacted by vegetation clearing and road maintenance for the proposed substation site. Rathburn et al. (1993) found that these snakes tend to occupy streamside sites during the summer and switch to nearby upland habitats during the winter. The use of adjacent upland habitat places them at risk from clearing and grading activities associated with the proposed substation and access road.

Direct effects to these reptiles may occur from construction activity as a result of mechanical crushing; loss of nesting, breeding, or basking sites; and human trampling. Disturbance would be associated with the removal of vegetation, excavation of soils, and construction adjacent to areas that support these species. Indirect effects to these species include increased predation from night lighting, compaction of soils, degradation of water quality, and the introduction of exotic plant species.

Impacts to these species would be considered significant absent mitigation (Class II). SCE has indicated that implementation of APM BIO-12 would reduce impacts to sensitive species at the Mill Creek communication site by limiting construction activities to disturbed habitat, or if necessary clearing habitat outside breeding season. SCE would also implement APM BIO-8 (Utilize a Frac-out Contingency Plan) to reduce impacts to aquatic resources in San Timoteo Creek. However these APMs would not be sufficient to ensure impacts to sensitive reptiles are avoided or fully mitigated. Therefore, the following Mitigation Measures are recommended to reduce impacts to sensitive reptiles not covered by the MSHCP to less-than-significant levels (Class II): Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-3a (Implement Weed Control Measures), B-13a (Conduct Pre-Construction Surveys and Relocate Sensitive Reptiles), and B-13b (Monitor and Relocate Species during Grading of Substation).

Mitigation Measures for Impact B-13

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-3a Implement Weed Control Measures

B-13a Conduct Pre-Construction Surveys and Relocate Sensitive Reptiles. SCE shall retain a qualified CPUC-approved biologist to conduct pre-construction surveys for sensitive reptiles. The qualified biologist must have an appropriate scientific collecting permit to handle sensitive species likely to occur in the Project area. The authorized biologist will be present during all ground disturbance and construction activities immediately adjacent to or within aquatic or terrestrial habitats that support populations of sensitive reptiles. If sensitive species are detected

in the work area during the surveys, the authorized biologist will capture and relocated individuals to suitable undisturbed habitat out of harm's way. All wildlife moved during project activities will be documented by SCE and documentation shall be provided to the CPUC. Any sensitive reptiles killed during construction activities shall be salvaged and deposited in the Santa Barbara Museum of Natural History, Vertebrate Zoology Division collections (contact: Paul Collins, Curator, [805] 682-4711, x-154).

B-13b Monitor and Relocate Species during Grading of Substation. In order to salvage sensitive reptiles from the substation site, SCE shall coordinate all initial grubbing and vegetation removal activities with the biological monitor such that biologists can watch these activities and capture and relocate any sensitive reptiles disturbed by this work. This is typically accomplished by slowly removing the vegetation at the ground surface in one pass, then in 4-inch lifts in successive passes until grading is at least 12 inches deep. The biologist shall have the authority to halt grading activities to relocate sensitive reptiles from the Project area.

Impact B-14: The Project would result in the loss of burrowing owls (Class II).

Burrowing owls were not observed in the Project area during focused surveys to date, but historically this species is known to overwinter and/or nest in the Pass Plan Area. In addition, although surveys conducted for SCE by Jones & Stokes (2007) did not detect direct sign of burrowing owls (individuals, pellets, or feathers) in the Proposed Project area in June and August 2007, there are CNDDDB records within, or in the vicinity of, the Project area. Suitable burrowing owl foraging habitat occurs in grassland/disturbed/ruderal areas within the Project area and rodent burrows are present in many locations of the proposed ROW (Appendix 4.1). If burrowing owls are present within a construction zone, or adjacent to such an area, disturbance could destroy occupied burrows or cause the owls to abandon their burrows. Construction during the breeding season could also result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment and would constitute a significant impact absent mitigation. Burrowing owls are a Criteria Species under the MSHCP, and if detected during surveys, 90 percent of those portions of the property that provide for the long-term conservation of the species must be avoided. To reduce impacts to this species SCE would implement APM BIO-4 which requires MSHCP compliance. SCE would conduct pre-construction surveys prior to construction of the Proposed Project and if it is determined that the 90 percent avoidance threshold cannot be met for the burrowing owl, a Determination of Biologically Equivalent or Superior Preservation must be prepared in accordance with guidelines set forth in Section 6.3.2 of the MSHCP. The CPUC would monitor compliance with this act through the implementation of Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), and impacts to burrowing owls would be less than significant (Class II).

Mitigation Measure for Impact B-14

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

Impact B-15: The Project would result in the loss of foraging habitat or disruption of nesting for special-status raptor species (Class II).

Numerous special-status bird species have the potential to occur in the Proposed Project area. Some of these include golden eagle, sharp-shinned hawk, merlin, Cooper's hawk, and northern harrier. White-tailed kite and prairie falcon also have the potential to forage and nest in and adjacent to the proposed ROW. Other species such as golden eagle may forage in the Project area but are not likely to nest near the proposed substation or ROW. Impacts to foraging and nesting habitat for special-status bird species would be the same as described for Impact B-4. Through SCE's participation in the MSHCP, impacts

to most bird species would be mitigated because the MSHCP provides coverage for specific species, which includes take authorization through the MBTA. Table D.4-4 contains a list of the species considered adequately conserved by the MSHCP. However, several sensitive birds present in the Project area are not covered by the MSHCP and impacts to these species would be considered significant absent mitigation. Some of these species include Swainson's thrush and Golden eagle (a species which occurs outside the MSHCP near the Mill Creek Communication site). As described under Impact B-4, SCE has indicated that measures identified in APM BIO-2, including monitoring and avoidance, would reduce impacts; however, there is still a potential for take to occur. To reduce impacts to less-than-significant levels, Mitigation Measure B-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds) is recommended. Implementation of this Mitigation Measure would ensure that violation of the MBTA does not occur and would reduce impacts to special-status raptor species to a less-than-significant level (Class II).

Mitigation Measure for Impact B-15

B-4 Conduct Pre-Construction Surveys and Monitoring for Breeding Birds

Impact B-16: The Project would result in electrocution of special-status bird species (Class II).

Golden eagle, northern goshawk, prairie falcon, and other large aerial perching birds are susceptible to the same threats of electrocution as listed bird species (see Impact B-8). Potential impacts to birds from electrocution are discussed in Impact B-9. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1-kV and 69-kV and "the likelihood of electrocutions occurring at voltages greater than 69-kV is extremely low" (APLIC 1996) and would be considered a less-than-significant impact with the implementation of Mitigation Measure B-9 (Construct to 2006 APLIC Guidelines) (Class II).

Mitigation Measure for Impact B-16

B-9 Construct to 2006 APLIC Guidelines

Impact B-17: The Project would result in subtransmission line collision by special-status bird species (Class II).

Potential impacts to birds from collisions with the electrical line are discussed in Impact B-9. Implementation of Mitigation Measure B-10 (Utilize Collision-Reducing Techniques) would reduce this impact to a less-than-significant level (Class II).

Mitigation Measure for Impact B-17

B-10 Utilize Collision-Reducing Techniques

Mammals

The Proposed Project area supports a variety of sensitive mammal species including several species of bats and small rodents including the black-tailed jackrabbit. Coyote, a relatively common and wide-ranging species, is listed as an MSHCP Covered Species and is a frequent visitor to most of the habitats present along the Proposed ROW. Impacts to sensitive mammals would be similar to those described for common wildlife (Impact B-5). Wide-ranging species such as black-tailed jackrabbit and coyote are not likely to be affected by the Proposed Project. These species are able to quickly egress an area and the short duration of construction at any single point would not result in adverse impacts to the species.

Impact B-18: The Project would result in the loss of the American badger (Class II).

Habitat for the American badger is present throughout the Proposed Project area and this species has the potential to occur in the vicinity of the Proposed Project. The home range of the badger is hundreds of hectares, and therefore is much larger than the area of habitat impacted by the Proposed Project. This extremely large home range size would allow any individual badger utilizing the Project site to avoid adverse impacts from the associated construction activities or habitat loss. Project implementation would not substantially reduce available foraging/denning habitat and direct habitat loss for this species is considered less than significant. Construction activities including clearing and grading of tower sites could result in impacts to badgers if they are present in the Project alignment. As this species is not covered by the MSHCP, impacts would be considered significant absent mitigation (Class II). To reduce impacts to this species Mitigation Measure B-18 (Avoid Active Burrows or Nests and Relocate during the Non-Breeding Season) is recommended.

Mitigation Measure for Impact B-18

B-18 Avoid Active Burrows or Nests and Relocate during the Non-Breeding Season. SCE shall retain a qualified biologist to survey and identify any badger dens and wood rat middens located in the Project ROW. Occupied dens/middens shall be flagged for avoidance during construction and a biological monitor shall ensure that construction activities do not disrupt the den. Work can occur within 30 feet of the den/midden outside the breeding season (February–May). If avoidance is not possible SCE shall utilize box traps or other CDFG-approved relocation techniques to relocate the animal. If this is not possible the den/midden shall be slowly excavated (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more than 4” at a time) before or after the breeding season (February–May) in an effort to relocate the animal. Any relocation of badgers shall occur only after consultation with the CDFG and CPUC monitor. Wood rat middens shall be relocated to suitable habitat as close as possible to the previous location.

Impact B-19: The Project would result in loss of special-status rodent species.

Several sensitive rodent species have the potential to occur in sections of the proposed ROW. These include the Los Angeles pocket mouse, San Diego pocket mouse, and San Diego desert wood rat. Some of these species, including the two species of pocket mouse, are known to occur in the wash habitat at Smith Creek.

The Los Angeles pocket mouse is a Criteria Species under the MSHCP and requires 90 percent of those portions of the property that provide for the long-term conservation of the species to be avoided. SCE would avoid most of the habitat utilized by this species; however, several subtransmission poles are present within wash habitat occupied by this species. To reduce impacts to this species SCE would implement APM BIO-4 which requires MSHCP compliance. SCE would conduct pre-construction surveys prior to construction of the Proposed Project, and if it is determined that the 90 percent avoidance threshold cannot be met for the pocket mouse, a Determination of Biologically Equivalent or Superior Preservation must be prepared in accordance with guidelines set forth in Section 6.3.2 of the MSHCP. The CPUC would monitor compliance with this act through the implementation of Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance). In addition, Mitigation Measures B-18 (Avoid Active Burrows or Nests and Relocate during the Non-Breeding Season) and B-19 (Avoid Burrow Areas) are recommended to reduce impacts to less-than-significant levels (Class II).

Mitigation Measures for Impact B-19

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-18 Avoid Active Burrows or Nests and Relocate during the Non-Breeding Season

B-19 Avoid Burrow Areas. SCE shall retain a qualified biologist to survey small mammal burrow densities for Los Angeles Pocket mouse in proposed work areas. Small mammal burrow densities shall be mapped as “low”, “medium”, and “high-density” on aerial maps of the Project alignment, and areas with a “high density” of burrows shall be flagged for avoidance during construction. The biologist shall monitor construction in these areas and work with equipment operators to avoid areas of high burrow densities during access to the site. If high burrow density areas cannot be avoided, then a qualified small mammal biologist shall live-trap target species out of these specific areas and close burrows for the duration of construction activities in that immediate area. If the 90 percent avoidance threshold is met for the pocket mouse or the Determination of Biologically Equivalent or Superior Preservation is provided this mitigation would defer to the MSHCP requirements.

D.4.5.5 Impacts to Jurisdictional Waters and Wetlands

Impact B-20: The Project would result in the loss of jurisdictional waters and wetlands (Class II).

As described in Section D.4.1.4.7 (Jurisdictional Waters), several waterways cross the Proposed Project area including San Timoteo Creek, Potrero Creek, Smith Creek, Montgomery Creek, and various unnamed blue-line streams and ephemeral drainages. SCE conducted a formal wetland delineation of jurisdictional waters and indicated that approximately 0.08 acre of USACE non-wetland waters and 0.04 acre of USACE wetland waters are expected to be temporarily impacted by the Proposed Project (Appendix 4.2). Additionally, approximately 0.001 acre of USACE non-wetland waters would be permanently impacted within an unnamed ephemeral drainage located approximately 400 feet east of the intersection of Bobcat Road and Turtle Dove Lane in unincorporated Riverside County south of the City of Banning. No USACE wetland waters are expected to be permanently impacted by Proposed Project activities. Approximately 0.75 acre and 0.043 acre of CDFG jurisdictional waters and associated riparian habitat are expected to be temporarily and permanently impacted by the Proposed Project, respectively, in the same locations described above.

As required by law SCE would comply with the regulations regarding conducting Project activities in water bodies under the jurisdiction of the State and federal government. As such SCE would obtain required permits pursuant to Section 401 and 404 of the CWA and the State Porter-Cologne Act and CDFG Code 1602. SCE would also comply with the provisions of the MSHCP regarding avoidance and minimization of impacts to riparian areas.

To reduce impacts to less-than-significant levels (Class II), Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) are recommended.

Mitigation Measures for Impact B-20

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

D.4.5.6 Impacts to Movement of Fish, Wildlife Movement Corridors, or Native Wildlife Nursery Sites

In southern California, fragmentation of the landscape has reduced much of the remaining habitat available to native species (Haas, 2000). In addition, recent studies suggest that habitat fragmentation and isolation of natural areas ultimately results in the loss of native species within those communities (Soulé et al., 1988 and 1991). In the Chino Hills area data indicate that fragmentation of habitat and a reduction in useable wildlife corridors can affect the population dynamics of predators including bobcat, coyote, and mountain lions (Haas, 2000). The amount and distribution of suitable habitat is an essential element to consider for the management of wildlife. In fact, some species require, and are often limited to, unique vegetation types for breeding or foraging.

As described in Section D.4.1.4.6, wildlife corridors provide a variety of functions and can include habitat linkages between natural areas; provide greenbelts and refuge systems; and divert wildlife across permanent physical barriers to dispersal such as highways and dams by roadway underpasses and ramps (Hass, 2000; Simberloff et al., 1992). Generally, the accepted definition describes a wildlife corridor as a linear habitat, embedded in a dissimilar matrix that connects two or more larger blocks of habitat (Beier and Noss 1998). Noss (1987) also suggests several potential advantages to corridors, including increased species richness and diversity, decreased probability of extinction, maintenance of genetic variation, a greater mix of habitat and successional stages, and alternative refugia from large disturbances.

This section of western Riverside County is a major biogeographic transition zone for the eastern and western boundaries of the coastal and desert ecoregions, respectively. The proposed 28-acre El Casco Substation site would be located immediately adjacent to San Timoteo Creek. The combination of unique geological, tectonic, and climatic conditions create and maintain contact zones between coastal-desert subspecies and species pairs in the Pass Area that are of significant taxonomic and evolutionary value. On a more local scale, San Timoteo Creek and its floodplain is considered a regionally important habitat linkage for species and provides a linkage from areas in San Bernardino County to Core Areas in the Badlands (RCIP, 2003). Maintenance of habitat quality and wetland functions and values of San Timoteo Creek are considered important functions for species utilizing this area.

The Proposed Project area is located in the Constrained Linkage Area 22, which identifies San Timoteo Creek as a critical corridor for wildlife movement in the region. The San Timoteo riparian corridor and adjacent uplands allow the movement of wildlife within specific areas but movement is constrained by SR-60, San Timoteo Canyon Road, the existing railroad line, and I-10. The MSHCP indicates the primary conservation goal for this linkage is to maintain the habitat quality for all associated species, including least Bell's vireo, Los Angeles pocket mouse, and other wildlife species using the creek and adjacent uplands as a wildlife corridor.

Impact B-21: The Project would result in the loss or restriction of habitat connectivity in Constrained Linkage 22 (Class II).

With the exception of the proposed El Casco substation, the Proposed Project would not substantially interfere with the movement of any native resident or migratory fish species. Most of the proposed subtransmission line is located in areas subject to rapid urbanization and in some areas the remaining open space is limited to the existing ROW. This is particularly evident in the Banning area as urbanization continues to expand on either side of the ROW west of the Sun Lakes community. Riparian or wash habitat in the Project area would also be spanned by the 115 kV subtransmission line, and where the LWS and TSPs would be placed within a wash, impacts would be short-term and would

not substantially alter the existing conditions at the sites. Similarly, electrical subtransmission lines have very limited footprints and do not result in a physical barrier to wildlife movement. As such impacts from the subtransmission line would not be significant (Class III).

The construction of the Proposed El Casco substation would result in the loss of habitat adjacent to San Timoteo Creek and could further degrade the already restricted corridors that occur in this area. The Proposed Project would permanently remove at least 14.36 acres of open space and temporarily disturb approximately 7.98 acres in the Pass Plan Area, specifically, in Criteria Cells 936, 1024, and Cell 1032 of the Potrero/Badlands Subunit. This would directly impact Proposed Habitat Linkage Elements 12 and 22 of the MSHCP, which are situated within the Norton Younglove Reserve. Construction of the proposed substation would result in significant impacts to this linkage absent mitigation (Class II).

Many vertebrates radio-tracked to date, ranging in size from red-legged frogs to mountain lions, do not necessarily follow assumed dispersal corridors (e.g., riparian areas, watercourses, etc.) in making long-distance movements. Instead, they may opt for a straight-line route between two points with little regard to topography and avoid linear riparian corridors altogether or utilize areas of least topographic “resistance,” such as flat ground on floodplains, to disperse. In the San Timoteo Canyon area the adjacent floodplain and upland areas are slowly becoming subject to urbanization as residential housing and commercial development expand in Riverside County. These land use changes restrict the free movement of wildlife in the region. Further degradation of movement features (i.e. passage areas, vegetated corridors, open space) would reduce the available range of areas that support the movement of plant propagules and wildlife.

The MSHCP specifically states that the maintenance of floodplain processes within the region and the management of edge conditions, which are present at the proposed El Casco substation site, are necessary to ensure the primary goal is reached (Section 3.2.3 of the plan). These smaller areas within the San Timoteo Creek region have specific planning and conservation goals geared toward the species and habitats that exist there. Goals for this region include:

- Maintain wetlands for purposes of connection and wildlife dispersal, as well as wetland species Conservation
- Maintain a contiguous connection between potential Conservation in San Bernardino County and the proposed Badlands Core Area
- Maintain winter roosts for white-tailed kite
- Maintain Core and Linkage Habitat for bobcat
- Maintain Linkage Area for mountain lion
- Maintain Linkage Area for Stephens’ kangaroo rat
- Determine potential for scattered populations of San Bernardino kangaroo rat along San Timoteo Creek
- Determine presence of potential Core Area for Los Angeles pocket mouse in San Timoteo Creek

In addition to identifying habitat for conservation, the MSHCP provides a planning framework for future facility projects within the planning region. This type of project designation provides allowances for pre-existing projects and facilities, including utilities and roadways within Critical Areas for conservation, to install and upgrade their facilities in order to provide critical and necessary functions to the region. The Proposed Project, including the proposed El Casco substation, is not specifically addressed in the Future Facilities section of the MSHCP, but coverage for this Project is provided under Section 7.3.9 of the Plan. Specifically the MSHCP indicates:

Future facilities such as water, sewer, electrical, gas and solid waste facilities that are described in more detail in Section 7.3.9 of the MSHCP would also be permitted within existing Public/Quasi-Public Lands subject to a finding of equivalent conservation provided through individual project mitigation. An equivalency analysis shall be provided by either the Permittee or the entity requesting a Certificate of Inclusion. The analysis shall be provided for review and concurrence by the Wildlife Agencies in narrative and graphic form comparing the effects/benefits of the Proposed Project including specific mitigation and compensation for lost conservation values, with the conditions prior to facility implementation. The analysis shall consider specific project design features, including consideration of the siting and design guidelines, contained in Section 7.5.1, as well as the Best Management Practices contained in Appendix C of the MSHCP. Impacts to Habitats within existing Public/Quasi-Public Lands shall be compensated by purchase and dedication into the MSHCP Conservation Area of land that is in addition to the Additional Reserve Lands.

Although the substation would result in the removal of habitat adjacent to San Timoteo Creek and would likely result in impacts to nesting birds that occur adjacent to the substation site, these impacts would be considered fully mitigated under the MSHCP. Provided SCE implements AMP BIO-4, which requires compliance with the MSHCP, impacts to this Criteria Area and Linkage 22 would be considered fully mitigated through the MSHCP. To further reduce impacts to wildlife movement in the Project area SCE would implement APMs BIO-5 (Dust Control) and BIO-7 (Shielded Substation Lighting). The following Mitigation Measures are also recommended: Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), B-5a (Reduce Noise Levels during Construction), B-5b (Use Magnetic Coils at Entrance Gate), and B-5c (Use Shielded Lighting and Schedule Daylight Maintenance). Although adverse, these impacts would be reduced to less-than-significant levels (Class II).

Mitigation Measures for Impact B-21

- B-1a Prepare and Implement a Habitat Restoration/Compensation Plan**
- B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance**
- B-5a Reduce Noise Levels during Construction**
- B-5b Use Magnetic Coils at Entrance Gate**
- B-5c Use Shielded Lighting and Schedule Daylight Maintenance**

D.4.5.7 Conflict with Local Policies or Ordinances Protecting Biological Resources

As described in Section D.4.1.3.1, the Proposed Project is located within portions of the Pass Area Plan and the Reche Canyon/Badlands Area Plan. Within the Area Plans, the Project has portions that lie inside and outside of Criteria Areas. Criteria Areas represent the area to which MSHCP Criteria are applied and from which 153,000 acres of new conservation will be conveyed to contribute toward assembly of the overall MSHCP Conservation Area. These areas have been identified by the MSHCP as having potential conservation value for specific biological resources. The Proposed Project consists of elements located in Criteria Cells 569, 572, 662, 753, 936, 1024, and 1032. Table D.4-1 provides a summary of the MSHCP conservation focus for these areas of the Proposed Project.

In addition to analysis based on location of specific Criteria Areas and Criteria Cells, the MSHCP provides delineated survey areas for Covered Species under the plan. A Covered Species is one of 146

species within the MSHCP Plan Area that will be conserved by the MSHCP in perpetuity. Projects proposed within the survey areas for Covered Species require, at a minimum, a habitat evaluation. If it is determined that potential habitat is present in the Project area, subsequent focused surveys must be conducted pursuant to accepted protocols. These areas, as they relate to the Proposed Project, are discussed in Section D.3.1.2, Survey Methodology, above.

Impact B-22: The Project would conflict with the MSHCP (Class II).

Based on a review of the MSHCP, the Proposed Project would not be in conflict with the existing plan provided SCE complies with the provisions identified in the EIR. The primary component of the MSHCP compliance is SCE's participation in the plan and the implementation of specific plan requirements. These requirements are further discussed below and include:

- Mitigation fee compliance
- Completion of focused surveys and habitat evaluations
- Utilizing Best Management Practices when constructing the Proposed Project
- Completion of the HANS process
- The Determination of Biologically Equivalent or Superior Preservation

The PEA indicated SCE will be acquiring Third Party Take Authorization under the MSHCP by participating as a developer and obtaining the required permits from the County of Riverside and the Cities of Banning and Beaumont. Section 17.1 of the MSHCP Implementing Agreement (IA) states:

“Upon execution of this Agreement by the Parties and the issuance of the Permits by the Wildlife Agencies, the Permittees may allow the Take of Covered Species Adequately Conserved by landowners, developers, farming interests and other private and public entities undertaking Covered Activities. Such Covered Activities must be under the direct control of the Permittees in conformance with approvals granted by the Permittees or carried out in conformity with a Certificate of Inclusion or other written mechanism and in compliance with this Agreement, the Permits and the MSHCP. As set forth in Section 11.0 of this Agreement, Permittees shall include as a part of any discretionary or certain City Ministerial Approvals, Certificate of Inclusion or other written mechanism a condition requiring compliance with the Permits, the MSHCP and this Agreement, and describes the Take Authorization granted. Such property owners, developers, farming interests, private entities and other Plan Participants shall receive Take Authorization provided they are in full compliance with all requirements of this Agreement, the MSHCP, the Permits, the Implementation Mechanism adopted by Permittees, issued entitlements and all other applicable requirements.”

Mitigation Fee Compliance

According to Section 8.5.1 of the MSHCP Plan, “Government Code Section 66000 et seq. allows cities and counties to charge new Development for the costs of mitigating the impacts of new Development. The Cities and County would implement a Development Mitigation Fee pursuant to the MSHCP; this fee would be one of the primary sources of funding the implementation of the MSHCP...A fee of approximately \$1,500 per residential unit (or an equivalent fee per acre) and \$6,131 of commercial or industrial Development was used in the revenue projection...” If SCE chooses to waive its status as a PSE and participate as a developer, then additional MSHCP requirements may apply, including associated Cell Criteria. Provided SCE implements APM BIO-4 which requires MSHCP compliance

and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) impacts would be considered less than significant (Class II).

HANS Process Compliance

As required by the MSHCP, a Habitat Evaluation and Acquisition Negotiation Strategy (HANS) application will be required for those portions of the Project that occur within MSHCP Criteria Cells. According to Section 6.1.1 of the plan:

“the HANS Process applies to property which may be needed for inclusion in the MSHCP Conservation Area or subjected to other MSHCP Criteria and shall be implemented by the County and those Cities that have agreed to implement the HANS process...The Process ensures that an early determination would be made of what properties are needed for the MSHCP Conservation Area, that the owners of property needed for the MSHCP Conservation Area are compensated, and that owners of land not needed for the MSHCP Conservation Area shall receive Take Authorization for Covered Species Adequately Conserved through the Permits issued to the County and Cities pursuant to the MSHCP.”

Provided SCE implements APM BIO-4 which requires MSHCP compliance and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), impacts would be considered less than significant (Class II).

Survey, Mapping, and Documentation Requirements

As projects are proposed within the Plan Area, the MSHCP requires a CEQA-level assessment of the potentially significant effects of those projects on riparian/riverine areas and vernal pools. The documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to species associated with these habitats. If the mapping identifies suitable habitat for species covered under this section of the MSHCP, and the Proposed Project design does not incorporate avoidance of the identified habitat, focused surveys for those species shall be conducted, and avoidance and minimization measures implemented in accordance with species-specific objectives for those species.

SCE has completed a wetland delineation report and habitat assessments for least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, Riverside fairy shrimp, and vernal pool fairy shrimp. As indicated in the reports, potential habitat for Riverside fairy shrimp and vernal pool fairy shrimp is not present in the Project area. Therefore, no further analysis is required pursuant to MSHCP guidelines. However, suitable habitat for least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo does occur in the Project area. Therefore, pursuant to MSHCP requirements, focused surveys for these species were conducted and each of these species was detected. As such SCE has complied with the provisions of the MSHCP and impacts would be considered less than significant with the implementation of APM BIO-4 which requires MSHCP compliance and B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) (Class II).

Avoidance and Minimization

For identified and mapped resources not necessary for inclusion in the MSHCP Conservation Area, project applicants shall develop project alternatives demonstrating efforts that first avoid, and then minimize direct and indirect effects to those resources. An avoidance alternative shall be selected, if feasible. If an avoidance alternative is selected, measures shall be incorporated into the project design

to ensure the long-term conservation of the areas to be avoided, and associated functions and values, through the use of deed restrictions, conservation easement, or other appropriate mechanisms.

If an avoidance alternative is not feasible, a practicable alternative that minimizes direct and indirect effects to riparian/riverine areas and vernal pools and associated functions and values to the greatest extent possible shall be selected. Those impacts that are unavoidable shall be mitigated such that the lost functions and values as they relate to Covered Species are replaced as set forth under a Determination of Biologically Equivalent or Superior Preservation. Portions of the Proposed Project have the potential to impact habitat within Criteria Areas. To reduce impacts to these Covered Species SCE would implement APM BIO-4 which requires MSHCP compliance. SCE would conduct pre-construction surveys prior to construction of the Proposed Project and if it is determined that the 90 percent avoidance threshold cannot be met for the Covered Species, a Determination of Biologically Equivalent or Superior Preservation must be prepared in accordance with guidelines set forth in Section 6.3.2 of the MSHCP. The CPUC would monitor compliance with this act through the implementation of Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance).

Protection of Narrow Endemic Plant Species Compliance

Section 6.1.3 of the MSHCP Plan provides guidelines for the long-term conservation of NEPS occurring within the Plan Area. The Proposed Project lies within NEPSSA 8 which targets Yucaipa onion and many-stemmed dudleya as species of concern within the survey area boundaries. The MSHCP requires habitat suitability assessments, at a minimum, for NEPS for projects occurring within a NEPPSA to determine whether focused surveys for individual species are necessary. SCE conducted habitat assessments for NEPS during seasonably favorable conditions for detection of these species and determined that suitable habitat occurs in the Project area for Yucaipa onion and many-stemmed dudleya. Upon determining suitable habitat, the MSHCP requires site-specific focused surveys for NEPS. Survey results completed by SCE are documented in mapped and text form (Appendix 4.1). Where survey results are positive, any proposals with the potential to affect NEPS shall be subject to avoidance, minimization and mitigation strategies, as described below. Therefore, focused surveys were conducted by SCE for Yucaipa onion and many-stemmed dudleya and it was determined that neither species is present in the Proposed Project area. As such SCE has complied with the provisions of the MSHCP and impacts would be considered less than significant with the implementation of APM BIO-4 which requires MSHCP compliance and B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) (Class II).

Urban/Wildlands Interface Compliance

Section 6.1.4 of the MSHCP presents guidelines intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area, where applicable. Future development in proximity to the MSHCP Conservation Area may result in edge effects that will adversely affect biological resources within the MSHCP Conservation Area. To minimize such effects, the following guidelines shall be implemented in conjunction with review of individual public and private development projects in proximity to the MSHCP Conservation Area:

Drainage – Proposed developments in proximity to the MSHCP Conservation Area shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged to the MSHCP Conservation Area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed

and paved areas into the MSHCP Conservation Area. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Area. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

Toxics – Land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife species, habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area. Measures such as those employed to address drainage issues shall be implemented.

Lighting – Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.

Noise – Proposed noise-generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms, or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards.

Invasives – When approving landscape plans for development that is proposed adjacent to the MSHCP Conservation Area, permittees shall consider the invasive, non-native plant species listed in Table 6-2 and shall require revisions to landscape plans (subject to the limitations of their jurisdiction) to avoid the use of invasive species for the portions of development that are adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography, and other features.

Barriers – Proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate in individual project designs to minimize unauthorized access, domestic animal predation, illegal trespass, or dumping in the MSHCP Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms.

Grading/Land Development – Manufactured slopes associated with proposed site development shall not extend into the MSHCP Conservation Area.

SCE has incorporated specific actions into the Proposed Project to comply with these provisions. In addition, Mitigation Measures identified in this document, specifically B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-5a (Reduce Noise Levels during Construction), B-5b (Use Magnetic Coils at Entrance Gate), and B-5c (Use Shielded Lighting and Schedule Daylight Maintenance), would ensure the Proposed Project does not conflict with the MSHCP. Further, SCE impacts or conflicts with the Plan would be considered less than significant with the implementation of APM BIO-4 which requires MSHCP compliance and B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) (Class II).

Additional Survey Needs and Procedures Compliance

Section 6.3.2 of the MSHCP suggests that additional surveys may be needed for certain species in conjunction with Plan implementation in order to achieve coverage for these species.

The Proposed Project lies within CSSA 6 which identifies Nevin's barberry as a species of concern within the survey area boundaries. Additionally, the MSHCP requires surveys for several plant species when suitable habitat occurs in a Project area. For the Proposed Project, these include round-leaved filaree and smooth tarplant. Initially, SCE conducted habitat evaluations for Nevin's barberry, round-leaved filaree, and smooth tarplant. It was determined that suitable habitat does not occur in the Project area for round-leaved filaree. However, the MSHCP indicates that round-leaved filaree has the potential to occur in the area. Suitable habitat was determined to be present in the Project area for Nevin's barberry and smooth tarplant. Consequently, focused surveys were conducted for these species. Surveys results concluded that Nevin's barberry is absent from the Project area. However, smooth tarplant does occur in the Project area.

The Proposed Project is also located within required survey areas for burrowing owl, Los Angeles pocket mouse, and San Bernardino kangaroo rat. SCE conducted habitat suitability assessments for these species within the Project area. It was determined that suitable habitat for San Bernardino kangaroo rat does not occur in the Project area. However, suitable habitat for Los Angeles pocket mouse and burrowing owl does occur and subsequent focused surveys were conducted. Survey results determined that burrowing owl is absent from the Project area, however, Los Angeles pocket mouse does occur.

For locations with positive survey results for any species addressed in Section 6.3.2 of the MSHCP, 90 percent of those portions of the property that provide for long-term conservation value for the identified species shall be avoided until it is demonstrated that conservation goals for the particular species are met. Findings of equivalency shall be made demonstrating that the 90 percent standard has been met. If it is determined that the 90 percent threshold cannot be met, a Determination of Biologically Equivalent or Superior Preservation must be prepared in accordance with guidelines set forth in Section 6.3.2 of the MSHCP.

The surveys required above for MSHCP compliance were conducted and are documented in this EIR (Section D.4.1.3). Provided SCE complies with the provisions of the MSHCP, and with the implementation of APM BIO-4 which requires MSHCP compliance and B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), impacts would be reduced to less-than-significant levels (Class II).

Mitigation Measures for Impact B-22

- B-1a Prepare and Implement a Habitat Restoration/Compensation Plan**
- B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance**
- B-5a Reduce Noise Levels during Construction**
- B-5b Use Magnetic Coils at Entrance Gate**
- B-5c Use Shielded Lighting and Schedule Daylight Maintenance**

D.4.6 CPUC's Northerly Route Alternative Option 3

D.4.6.1 CPUC's Northerly Route Alternative Option 3 – Environmental Setting

D.4.6.1.1 Literature Review

This alternative is located within the same general area as the Proposed Project. Therefore, the information from the literature search that was conducted for the Proposed Project was utilized to provide information for this alternative.

D.4.6.1.2 Survey Methodology

The CPUC's Northerly Route Alternative Option 3 (also referred to as Route Alternative Option 3) subtransmission line route is located within the same general region as the Proposed Project and traverses the same vegetation and community types as the Proposed Project. Construction activities associated with the subtransmission portion of this alternative are primarily focused on two lines, the El Casco-Maraschino line and the El Casco-Banning line. The El Casco-Maraschino line follows the same route to the Maraschino Substation as the Proposed Project route. Therefore the Environmental Setting and Impact Analysis for this portion of the alternative route are very similar to that of the Proposed Project. The Route Alternative Option 3 El Casco-Banning Line would commence at the proposed El Casco Substation and run in a northeasterly direction until the line ends at the Banning Substation. This northerly route would pass through the Cities of Calimesa, Beaumont, and Banning.

Field surveys for sensitive plants and wildlife were conducted along sections of the route that differed from the Proposed Project. The habitat assessment was conducted in May, June, and October of 2007. In addition, most of this route was previously surveyed in 2005 for the CPUC-approved Devers-Palo Verde Transmission Line Project and in May and June of 2006 for the Banning Substation Project. SCE also conducted sensitive species surveys (2005 and June and September of 2006) for plants and wildlife on this alignment from the proposed El Casco Substation site to the Zanja Break-off.

MSHCP Survey Requirements

Focused surveys required by the MSHCP for this alternative were not conducted by SCE for portions of the ROW that were different from the Proposed Project. While most of this alternative had been surveyed by SCE up to the Zanja Break-off, not all of the surveys meet the requirements identified in the MSHCP as described in Section D.4.1.3.1 (Special Habitat Management Areas Overview). These surveys do not hinder the ability of the EIR to analyze impacts to sensitive species; however, they will be required if this alternative is selected. Under CEQA, alternatives are proposed to compare different routing options and provide the decision makers with a basis to evaluate the impacts of the Proposed Project when evaluated next to a range of reasonable alternate projects. The CPUC evaluates project alternatives at the same level of detail as the proposed project to provide the decision makers with complete information regarding the comparative merits of all options available for implementation of a project. However, CEQA does not require the same level of detail as the Proposed Project for analysis of alternatives. Notwithstanding this fact, the entire alternative route was subject to field verification and an extensive literature search. If supplemental surveys are required to provide more detailed analysis of the route in compliance with the MSHCP, they will not likely affect the environmental analysis provided below. It is important to note that even if the surveys required by the MSHCP identify a resource not identified in the impact analysis below, for most species, the impact classification would not change. This is based on the use of the MSHCP to fully mitigate impacts to the resources with the potential to occur in the region. As the MSHCP has identified the types of resources

with the potential to occur in the Project area and provides mitigation if present, there should not be a substantial change in the impact analysis at the conclusion of the required MSHCP surveys.

D.4.6.1.3 CPUC's Northerly Route Alternative Option 3 Existing Conditions

The affected environment for this alternative consists of the same habitat and community types as the Proposed Project, and the potential for sensitive plants and wildlife to occur would be similar to Proposed Project.

Local Overview

The first component of the Route Alternative Option 3 would utilize the same ROW as the Proposed Project up to the Maraschino substation. After this point, the Banning-Maraschino line would utilize existing infrastructure, and there would be no construction between Banning and Maraschino Substations, except for a 0.7-mile segment that would run due south out of the Banning Substation before connecting to the existing line. See Section C.4.2.1 (CPUC's Northerly Route Alternative Option 3) for more details. The second portion of this alternative is the northerly line route which runs from the proposed El Casco substation to the Banning substation. Environmental conditions for this alternative are described below.

El Casco substation to the "Zanja Break-off." From the proposed El Casco Substation the northern route would cross San Timoteo Creek, which supports a narrow, willow-dominated riparian corridor, and enter an existing 220-kV transmission corridor. As described in Section D.4.1.3.2, San Timoteo Creek supports populations of the federally endangered least Bell's vireo and southwest willow flycatcher. In addition, this riparian corridor supports a variety of neotropical birds and is foraging habitat for the western mastiff bat (*Eumops perotis*). Similar to the Proposed Project, this short section of habitat is likely the most sensitive area within the entire alternative route.

From San Timoteo Creek the ROW crosses San Timoteo Canyon Road and veers eastward over a floodplain/drainage area that currently supports grazing and other agricultural uses. Non-native grasses characterize this area and are the dominant feature in this section. This disturbed section did not appear to support habitat-specific indicators of, or suitability for, the occurrence of any federally listed species. However, the area likely supports foraging for white-tailed kite, a California Fully Protected Species. As the ROW moves east the line ascends a small, steep-sided ridge, dominated by chamise chaparral, non-native grassland, and scrub oak woodland. Many areas in this section support small populations of Plummer's mariposa lily (a CNPS List 1B species). As described in the PEA (SCE, 2007a), this hilly section east and north of the El Casco substation supports potential habitat for this species in many locations. The potential for rare plants is generally similar to the Proposed Project for this alternative. Likewise, habitat conditions are generally the same when compared to the Proposed Project and could support a variety of California Species of Special Concern including Northwestern San Diego pocket mouse, California (= *Dulzura*) pocket mouse, coast horned lizard, coast patch-nosed snake, and orange-throated whiptail.

As the subtransmission line extends further eastward, the line crosses I-10 and passes through a corridor that separates residential development to its north and south. The corridor supports primarily disturbed habitat dominated by exotic brome and oat grasses, mustards, and weedy annuals. This habitat type supports a variety of small rodents and is good foraging habitat for many raptors. In fact, several raptors were observed on this route perched on the towers. These included red-tailed hawk, ferruginous hawk (*Buteo regalis*) (a CSC), and American kestrel (*Falco sparverius*). Many other common native birds were also observed, including mourning dove, house finch, and Brewer's blackbird (*Euphagus cyanocephalus*). Non-native birds included European starling (*Sturnus vulgaris*)

and domestic pigeon (*Columba livia*). Tracks of the southern mule deer were observed in this area and the existing utility ROW likely provides a movement corridor for this species based on the number and direction of observed tracks.

The remainder of this alternative route up to the Zanja Break-off passes over old agricultural land subject to cattle grazing. Portions of the line in this area abut residential development to the south, while open space still remains north of the ROW. Raptors observed foraging at various locations over the annual grasslands include ferruginous hawk, prairie falcon (*Falco mexicanus*), red-tailed hawk, American kestrel, Merlin (*Falco columbarius*), and Northern harrier (*Circus cyaneus*). Other birds observed foraging at various locations in this area were mourning dove, common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), American pipit (*Anthus americanus*), Brewer's blackbird, and Say's phoebe (*Sayornis saya*).

No burrowing owls were observed, and although burrows in the area are scarce, the site could serve as a winter foraging site. Based on the conditions of the site, breeding would not be expected. Foraging by the golden eagle would be expected in the area, especially in consideration of the proximity to nearby foothills to the north.

One major difference in this alternative was that inspection of the entire length of this portion of the line revealed little evidence of small mammal activity. Observed mammals included black-tailed hare (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyi nudipes*), and Botta's pocket gopher (*Thomomys bottae*). There was no indication that the area harbors any populations of sensitive small mammals (e.g., Stephens kangaroo rat, spiny pocket mice [*Chaetodipus* spp.], or silky pocket mice [*Perognathus* spp.]). Rare or infrequent occurrence of mule deer, cougar, and possibly badger (*Taxidea taxus*) is expected.

“Zanja Break-off” to Banning Substation. Segment 1 of Route Alternative Option 3 has its eastern terminus where the route crosses the location of the existing Devers-Banning-Windpark-Zanja 115 kV subtransmission line, near the northern terminus of Mountain Avenue in the City of Banning, which is referred to as the “Zanja Break-off”.

From this location the line continues east and then south to join the Banning Substation. Habitat at the Zanja Break-off is the same annual and ruderal dominated grazing land described for the eastern end of Segment 1. However, just to the east of the Break-off, a short 0.35-mile section of the ROW ascends a steep portion of the lower foothills of the San Gorgonio Mountains. The hillsides in this area consist of recently (early 2007) burned chaparral and sage scrub vegetation. Currently the vegetation remains in a very early stage of recovery. As the line proceeds east a narrow canyon is located between two small ridges. Nestled between two of these foothill ridges, between Sunset Avenue and the Zanja Break-off, is an oak canyon, the bottom of which appears to have been little affected by recent fires. The canyon bottom is located below existing power lines and would not be affected by the proposed alternative. Further east the proposed alternative would cross another, larger (ca. 0.75-mile) finger of the San Gorgonio foothills, which supports a mosaic of habitats depending on aspect of the hillside including sage scrub, chamise chaparral, and southern mixed chaparral.

As the line extends further east from the foothills it descends to the east along the edge of Banning Creek (alternately Banning Creek or Canyon) to the edge of the Morongo tribal lands. Any new subtransmission line features would be built out of (and well above the bottom of) the creek; however, the wash exhibits relatively high-quality Riversidian and alluvial fan scrub habitat. To avoid Morongo tribal land north of the Banning city limits, the route would exit SCE's existing Devers-Vista 220 kV ROW and head south on San Gorgonio Avenue through urbanized areas.

Wildlife in the eastern portion of this route, including the short sections of foothills crossed by the proposed alternative section, were similar to the adjacent grazing land and included numerous raptors and native birds. Similar to the other area no burrowing owls were observed; however white-wash and several burrowing owl pellets were found on and around the wooden fence posts adjacent to the transmission lines. Burrows are scarce in the area; however, there were several that could be utilized by this species. These burrows did not contain evidence of use. Foraging by the golden eagle would be expected in the area, especially in consideration of the site's proximity to nearby foothills.

Few if any signs of small mammals were present in the grazing land with the exception of black-tailed hares, ground squirrels, and Botta's pocket gophers. There was no indication that the area harbors any populations of sensitive small mammals (e.g., Stephens's kangaroo rat, or sensitive pocket mice). Although several sandy-bottomed drainages pass under the subtransmission line route, these are quite narrow and support little vegetation and are unlikely habitat for pocket mice. As the drainages move lower in the watershed (e.g., several hundred meters to the south) they may become broader and may support the vegetation necessary to support populations of small mammals.

The most likely locations for sensitive wildlife in this section are the narrow sections of foothills crossed by the Project. These habitats may harbor several sensitive species; however, neither focused surveys nor trapping of any type were performed during this assessment. Among the sensitive species potentially occurring in the area are Northwestern San Diego pocket mouse, California (= *Dulzura*) pocket mouse, Coast horned lizard, coast patch-nosed snake, and orange-throated whiptail. Although not observed, the area has some potential to support California gnatcatcher (*Polioptila californica*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*).

Sensitive species that may occur in the wash area include California gnatcatcher, Southern California rufous-crowned sparrow, Northwestern San Diego pocket mouse, and San Bernardino kangaroo rat, a federally listed endangered species.

Western Riverside MSHCP

This alternative is located within the same portion of the MSHCP Area Plan boundaries as the Proposed Project. The ROW crosses portions of The Pass Area Plan and The Reche Canyon/Badlands Area Plan.

Within the Area Plans, this alternative has portions that lie inside and outside of Criteria Areas. Criteria Areas represent the area to which MSHCP Criteria will be applied and are discussed in greater detail in Section D.4.1.3.1. The Route Alternative Option 3 alignment is located within the same Criteria Cells as the Proposed Project. This alternative is also located within the same Must Survey Areas designated by the MSHCP as the Proposed Project and require habitat assessments and surveys for the San Bernardino kangaroo rat, Los Angeles pocket mouse, burrowing owl, and narrow endemic plant species. Updated surveys of this alignment would be required if this alternative is selected.

D.4.6.2 CPUC's Northerly Route Alternative Option 3 – Environmental Impacts and Mitigation Measures

D.4.6.2.1 Impacts to Riparian or Sensitive Natural Communities

Impact B-1: The Project would cause temporary or permanent loss of native vegetation communities (Class II).

Construction of the Route Alternative Option 3 would result in the same types of impacts to native vegetation communities (Impact BIO-1) as the Proposed Project. Impacts associated with construction of the El Casco Substation, modifications to the Banning and Zanja Substations and Mill Creek

Communications site, and installation of the fiber optic cables would all be the same as described for the Proposed Project. Impacts associated with modifications to the existing 115 kV subtransmission line as well as construction of the new 115 kV subtransmission line would also cross similar habitat conditions common to the Project region.

As described in Section D.4.6.1.3, the Route Alternative Option 3 would include major areas analyzed for the Proposed Project. Habitat present for both the El Casco substation and subtransmission line to the Maraschino substation would be the same. The primary difference in this alternative is the more northerly pathway required for the subtransmission line. This alternative would require approximately 9.5 miles of new 115 kV line. As the line departs the El Casco substation site it would cross a broad riparian area north of San Timoteo Creek and move into a hilly region within the city of Beaumont. The line would then cross areas supporting residential and urbanized areas in addition to vegetation communities such as non-native grassland, alluvial fan scrub, and coastal sage scrub. As the line passes the Zanja Break-off it would cross relatively undisturbed habitat prior to crossing back into urbanized areas.

Construction-related activities associated with this alternative would be similar to the Proposed Project and impacts would be considered significant (Class II) absent mitigation. Similar to the Proposed Project SCE would mitigate the loss of vegetation through the implementation of the MSHCP process. APM BIO-4 indicates SCE would comply with all regulations outlined in the MSHCP. Provided SCE complies with the Best Management Practices identified in the MSHCP (Volume 1-Appendix C of the MSHCP) and provides the appropriate fees, Project impacts to vegetation are mitigated. This process would require SCE to document the total acres of habitat subject to Project disturbance and provide fees that mitigate for the loss of covered habitats. In addition to the APMs proposed by SCE (APM BIO-1 and APM BIO-4) potential impacts to native vegetation would be reduced to a less-than-significant level through implementation of Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance).

Mitigation Measures for Impact B-1

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

Impact B-2: The Project would cause loss of foraging or breeding habitat for wildlife (Class II).

The Route Alternative Option 3 supports similar important foraging habitat for birds, small mammals, and reptiles as the Proposed Project. Some of the important foraging habitats present in the Project area include non-native grasslands, coastal sage scrub, and riparian habitats habitat. As with the Proposed Project this alternative would also require construction of the proposed El Casco substation. Installation of new tower locations would result in habitat loss similar to the Proposed Project. Large numbers of raptors were observed in this alternative included Cooper's hawk, merlin, and northern Harrier. A peregrine falcon was also observed north of Banning.

Foraging habitat may also be lost in some of the small drainages that would be subject to Project disturbance. These areas are known to support several sensitive mammal species including the Los Angeles pocket mouse. Temporary and permanent loss of native vegetation communities that provide foraging habitat for raptors or other sensitive wildlife would be considered a significant impact without mitigation (Class II). However, impacts to foraging habitat would be primarily temporary and raptors typically forage over much larger areas than would be impacted by the Route Alternative Option 3.

Similar to the Proposed Project, impacts to vegetation communities and habitat utilized as foraging by sensitive wildlife would be mitigated through the implementation of APMs BIO-1 and BIO-4. Through the participation of the MSHCP, impacts to habitat loss for Covered Species are mitigated through the acquisition of Core Areas within the proposed MSHCP implementation area (RCIP, 2003). Some species known to occur in the Project area are not covered by the MSHCP and include raptors such as the CDFG fully protected white-tailed kite. Loss of foraging habitat for this species would be considered significant without mitigation. Implementation of Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) would reduce Impact B-2 to a less-than-significant level (Class II) and no further mitigation is recommended.

Mitigation Measures for Impact B-2

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

Impact B-3: The Project would introduce non-native and invasive plant species (Class II).

Route Alternative Option 3 contains the same types of non-native vegetation, including noxious and invasive weeds, as the Proposed Project. In addition, where residential communities abut riparian areas such as the small washes that cross the area near Interstate 10, landscape vegetation often invades the riparian zone. In addition, the city of Banning uses common landscape elements such as eucalyptus and annual flowers that are present near many portions of the ROW. The introduction or spread of non-native or noxious weeds would be the same as described for the Proposed Project and would be related to the use of vehicles, construction equipment, or earth materials contaminated with non-native plant seed or the use of straw bales or wattles that contain seeds of non-native plant species. Although the region currently supports wide populations of noxious weeds, the introduction of new species not currently present in the region or the spread of noxious plant species across the ROW would be considered a significant impact absent mitigation (Class II). Mitigation would be the same as recommended for the Proposed Project and would require the implementation of the Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), B-3a (Implement Weed Control Measures), and B-3b (Landscape with Native or Non-invasive Plant Species) to reduce potential impacts from the introduction of non-native plant species to a less-than-significant level (Class II).

Mitigation Measures for Impact B-3

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-3a Implement Weed Control Measures

B-3b Landscape with Native or Non-invasive Plant Species

Impact B-4: The Project would result in a loss of nesting birds (Class II).

The Route Alternative Option 3 contains the same types of foraging and nesting habitat for both resident and migratory birds as the Proposed Project. Some of these areas include the oak scrub and chaparral dominated hills south of the Proposed El Casco substation, Riversidean coastal sage scrub

habitats present in Banning, and the non-native grasslands present at the proposed substation site and open areas north of the City of Banning near the Zanja break-off.

This alternative may also impact raptors that utilize the existing towers for nesting and burrowing owls that may occur in the Project area. Displacement of native birds, raptors, or burrowing owls during the breeding season would be considered a significant impact (Class II) without mitigation.

As with the Proposed Project most of the birds present in the Route Alternative Option 3 Project area are covered under the MSHCP and impacts to these species would be mitigated through SCE's participation in the program. Table D.4-4 contains a list of the species considered adequately conserved by the MSHCP. To further reduce potential impacts to nesting birds and raptors SCE would implement APM BIO-2 which requires scheduling major ground disturbance outside the breeding season for nesting birds. However, as with the Proposed Project it is likely that construction activities would occur in during the breeding season for some species not covered by the MSHCP. SCE has indicated that measures identified in APM BIO-2, including monitoring and avoidance, would reduce impacts; however, there is still a potential for take to occur. Implementation of Mitigation Measures B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) and B-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds) would ensure that violation of the MBTA does not occur and would reduce impacts to nesting birds to an adverse, but less-than-significant level (Class II).

Mitigation Measures for Impact B-4

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-4 Conduct Pre-Construction Surveys and Monitoring for Breeding Birds

Impact B-5: The Project would result in permanent disturbance to wildlife at the proposed El Casco Substation site due to noise and increased human presence (Class II).

This alternative is similar to the Proposed Project and would include the construction and operation of the El Casco Substation. This would create the same types of impacts to wildlife from noise, light, and human disturbance as the Proposed Project. As with the Proposed Project, impacts to wildlife in or near the proposed substation site from noise, lighting, and human disturbance would be fully mitigated through compliance with the MSHCP and the implementation of APMs and Mitigation Measures. Mitigation Measures B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), B-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds), B-5a (Reduce Noise Levels during Construction), B-5b (Use Magnetic Coils at Entrance Gate), and B-5c (Use Shielded Lighting and Schedule Daylight Maintenance) are recommended. Although adverse, these impacts would be reduced to less-than-significant levels (Class II).

Mitigation Measures for Impact B-5

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-4 Conduct Pre-Construction Surveys and Monitoring for Breeding Birds

B-5a Reduce Noise Levels during Construction

B-5b Use Magnetic Coils at Entrance Gate

B-5c Use Shielded Lighting and Schedule Daylight Maintenance

D.4.6.2.2 Impacts to Endangered or Threatened Species, or Proposed or Critical Habitat

Vegetation

Route Alternative Option 3 has the same potential to support listed plant species as the Proposed Project; however, neither State nor federally listed plant species were identified during the surveys conducted by SCE or Aspen. One caveat is the low levels of precipitation received during the 2006/2007 rain year. The lack of soil moisture resulted in very poor or non-existent plant expression in many areas which would limit the detection of many annual plants. As with the Proposed Project, although listed plant species were not observed and numerous surveys have been completed in the Project ROW, there remains a potential for some sensitive plants to occur. With the exception of Nevin's barberry, most of the remaining species are difficult to identify when not in bloom. As described above, much of the alternative ROW is located in the Must Survey Area for Narrow Endemic Plants. As required by the MSHCP SCE would be required to complete these surveys prior to the approval by the MSHCP of this alternative.

Similar to the Proposed Project, much of the northern route has been subject to intense grazing pressure for several years, particularly in the area north of Banning near the Zanja Break-off. Grazing can limit the detection or presence of sensitive plants as many are popular foraging items. Critical habitat for listed plants does not occur in the Project area.

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class II)

This alternative would be subject to the same types of ground-disturbing activity as the Proposed Project. The loss of listed plant species would occur from the construction of the proposed substation, the placement of LWS and TSPs, grading of new access roads, maintenance of construction equipment and supplies, staging of equipment and materials, and use or improvement of existing access roads.

To reduce potential impacts to listed plant species SCE would implement the same Mitigation Measures as recommended for the Proposed Project. SCE would also implement APM BIO-4 which requires SCE to comply with the MSHCP regarding narrow endemic plant species. Implementation of the APMs described for the Proposed Project and the implementation of Mitigation Measure B-6 (Conduct Surveys for Sensitive Plant Species and Flag for Avoidance) would ensure impacts to listed plants remain less than significant (Class II).

Mitigation Measure for Impact B-6

B-6 Conduct Surveys for Sensitive Plant Species and Flag for Avoidance

Wildlife

The Route Alternative Option 3 occurs in the same general region as the Proposed Project and is expected to support similar sensitive wildlife. This alternative includes the El Casco Substation site and would utilize the same ROW adjacent to San Timoteo Creek. Some of the listed species observed in the Project area include southwestern willow flycatcher, northwestern willow flycatcher, least Bell's vireo, western yellow-billed cuckoo, and peregrine falcon. Species with a potential to occur include Swainson's hawk and coastal California gnatcatcher. San Bernardino kangaroo rat and Stephens's kangaroo rat have the same potential to occur as the Proposed Project. Critical habitat for listed wildlife does not occur in the Project area.

Impacts to listed species would be same as described for the Proposed Project. As the subtransmission line crosses the same habitat types as the Proposed Project, direct impacts to wildlife would include the removal of vegetation and subsequent loss of wildlife habitat. Construction activities could also result in the displacement and/or potential mortality wildlife that are poor dispersers such as snakes, lizards, and small mammals. Construction may also result in the temporary degradation of the value of adjacent native habitat areas due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. Indirect impacts may include the increased human presence and the loss of habitat through the colonization of noxious weeds. Mortality or loss of reproductive success may also occur during land clearing, excavation, and grading phases.

Impact B-7: Construction activities would result in indirect or direct loss of Quino Checkerspot habitat (Class II)

Invertebrates. Similar to the Proposed Project there is no indication that listed invertebrates occur within the Route Alternative Option 3 alignment. However, two listed species of fairy shrimp, Riverside fairy shrimp and vernal pool fairy shrimp, are known to occur in southwestern Riverside County. These species have not been recorded in the Project area but have not been documented in the region. Vernal pool surveys conducted in 2007 for the Proposed Project did not detect this resource in the Project area and suitable soils for vernal pools are generally absent from the Project ROW. Therefore impacts to vernal pool brachiopods are not expected to occur.

Quino Checkerspot butterfly has some potential to occur based on habitat maps included within the MSHCP. Direct impacts to this species could occur, if present, by removing host plants required by this species. Open-canopied habitats such as sage scrub, chaparral, and grasslands, that contain host plants, are considered suitable habitat. This is a fully Covered Species under the MSHCP with no survey requirements. The MSHCP monitors take of this species through the documentation of habitat loss.

Potential indirect effects to the species could occur from the spread of noxious or invasive weeds that degrade habitat utilized by this species. Impacts to this species are fully mitigated through SCE's participation in the MSHCP. Implementation of APM BIO-4, which requires MSHCP compliance and Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), and B-3a (Implement Weed Control Measures) would reduce potential impacts to this species to a less-than-significant level (Class II).

Mitigation Measures for Impact B-7

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-3a Implement Weed Control Measures

Fishes. This alternative would result in the same potential impacts to San Timoteo Creek as the Proposed Project. Portions of this creek are known to support populations of the Santa Ana sucker, a federally and State protected fish. Populations of this species have not been detected in this section of San Timoteo Creek. In addition, downstream blockages and the potential intermittent activity of this section of the creek have likely precluded the presence of this species at the proposed substation site. Other sections of the ROW also contain several blue-line drainages; however, these creeks are primarily intermittent and ephemeral and run in direct response to precipitation events. Therefore, there is no indication that listed fish occur in the alignment of the Route Alternative Option 3.

Amphibians. Listed amphibians are not known to occur within the alternative alignment. Impacts to listed amphibians would be the same as the Proposed Project and would be considered less-than-significant (Class III).

Reptiles. The Route Alternative Option 3 area is not known to support any listed reptiles. The closest location for listed reptiles is the dune areas of the Coachella Valley located outside the Project area. Therefore impacts to listed reptiles are not expected to occur and would be the same as the Proposed Project (Class III).

Birds. This alternative includes both the El Casco substation site and the 115 kV subtransmission line between the Maraschino Substation and El Casco Substation. Several listed bird species have the potential to occur in this area. Most of the listed bird species are associated with the riparian and wetlands located near San Timoteo Creek, as described for the Proposed Project. In addition, the upland areas present in the open areas north of Banning and the El Casco-Maraschino route are utilized as foraging for several raptor species. Coastal sage scrub communities located in the Project area east of the Zanja Break-off may also support California gnatcatcher, although these species have not been recorded in the Project area. Therefore this alternative could result in same type of impacts to listed birds as the Proposed Project.

Impact B-8: The Project would result in habitat loss or disturbance to listed birds, including migratory birds and raptors (Class II).

Similar to the Proposed Project, southwestern willow flycatchers, northwestern willow flycatchers, western yellow-billed cuckoo, and least Bell's vireo were documented in San Timoteo Creek immediately adjacent to the proposed substation site. Additionally, trees and, in some cases, subtransmission towers, in the Project area can be used as nest sites by one or more species of raptors. Other listed species, such as northwestern willow flycatchers and Swainson's hawks, are present in Project area as migrants or overwintering species.

Impacts to listed bird species would be the same as described for the Proposed Project. The listed bird species present in the Route Alternative Option 3 area are Covered Species under the MSHCP. Through participation in the MSHCP impacts to these species would be considered fully mitigated. To further reduce potential impacts to nesting birds and raptors SCE would implement APM BIO-2 which requires scheduling major ground disturbance outside the breeding season for nesting birds (generally between September 1 and January 31). To reduce impacts to less-than-significant levels for species not covered by the MSHCP including California Fully Protected Species, Mitigation Measures B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) and B-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds) are recommended. Implementation of these Mitigation Measures would ensure that impacts to listed birds are reduced to a less-than-significant levels (Class II).

Mitigation Measures for Impact B-8

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-4 Conduct Pre-construction Surveys and Monitoring for Breeding Birds

Mammals

Similar to the Proposed Project, two State or federally listed mammal species have limited potential to occur in or adjacent to the Route Alternative Option 3, the San Bernardino kangaroo rat and Stephens' kangaroo rat. As part of the MSHCP Must-Survey Requirement, SCE conducted focused surveys for

San Bernardino kangaroo rat and other small mammals in the Proposed Project area in 2007 (Jones & Stokes, 2007). These surveys were completed for sections of the ROW that were the same as the Proposed Project. Focused surveys for these species were not complete for the northerly alignment.

These surveys did not detect these species and the report concluded that Riversidean alluvial fan sage scrub in the Project area is too disturbed and fragmented to support these species. In addition, Aspen biologists indicated the northerly alignment is unlikely to support populations of these species (Haas, 2007). As with the Proposed Project, 14 acres of potentially suitable habitat for Stephen's kangaroo rat would be permanently disturbed. This habitat is mostly associated with the proposed El Casco Substation site. However, this species was not observed in the Project area and overall habitat conditions at the Project site are not favorable. Habitat conditions in the Project area are not suited for Stephen's kangaroo rat and this species is not expected to occur (Haas, 2007). However, because this species is fully covered under the MSHCP and surveys are not required for this species; if present, activities that result in the loss of habitat would be fully mitigated through the MSHCP process.

Similar to the Proposed Project, impacts to these species, if present, would be fully mitigated through the existing MSHCP development fee structure. Impacts to listed mammals would be further reduced through Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance). Mitigation Measure B-3 (Implement Weed Control Measures) would further reduce indirect impacts to listed mammals by reducing the potential for the propagation of noxious weeds.

Impact B-9: The Project would result in the electrocution of listed bird species (Class II).

Impacts to sensitive birds from electrocution would also be the same as the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels less than 69 kV (APLIC, 2006; Manville II², 2005). The Project's voltage levels are 115 kV, so the likelihood of electrocution is low based on SCE's commitment to construct raptor-safe LWS and TSPs. In addition, as with the Proposed Project, this alternative would be constructed with revised and updated APLIC guidelines as required in Mitigation Measure B-9 (Construct to 2006 APLIC Guidelines). Therefore, impacts would be the same as the Proposed Project and would be considered less-than-significant (Class II).

Mitigation Measure for Impact B-9:

B-9 Construct to 2006 APLIC Guidelines

Impact B-10: The Project would result in subtransmission line collisions by listed bird species (Class II).

Potential impacts from bird collisions would also be the same as the Proposed Project. This alternative would occur in the same general areas and be placed in or adjacent to existing transmission and subtransmission lines. Both the Proposed Project and this alternative would require running lines adjacent to San Timoteo Creek. One area where impacts may increase is along the eastern border of the alternative where existing distribution lines would be replaced with taller structures. However, as with the Proposed Project implementation of Mitigation Measure B-10 (Utilize Collision-Reducing Techniques) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less-than-significant level.

Mitigation Measure for Impact B-10

B-10 Utilize Collision-Reducing Techniques

D.4.6.2.3 Impacts to Candidate, Sensitive, or Special-status Species

Impact B-11: The Project would result in the loss of special-status plant species (Class II).

Construction-related impacts to sensitive plant species would be similar to those described for the Proposed Project. Ground-disturbing activity, including construction of the El Casco substation, would result in the loss of smooth tarplants that occur within the construction footprint. Tower pad preparation and construction, tower removal, and use or improvement of existing access roads has the potential to disturb sensitive plant species in other areas. Indirect impacts can include the spread of noxious or invasive weeds.

Botanical surveys conducted by SCE identified several Plummer's mariposa lilies along the northern alignment. This species occurs in several locations and could be subject to Project disturbance. Several other sensitive plant species may also occur, including many-stemmed dudleya; although habitat conditions for this species are not favorable. However, the low levels of precipitation and heavy grazing pressure present in many areas may limit the ability to detect this species. In addition, SCE would be required to complete focused surveys for NEPS within the northern portion of the alignment. Therefore there is some potential for this and other rare plants to occur.

Similar to the Proposed Project, SCE is required by the MSHCP to avoid populations of Criteria Species. For locations with positive survey results for any species addressed in Section 6.3.2 of the MSHCP, as is the smooth tarplant; 90 percent of those portions of the property that provide for long-term conservation value for the identified species shall be avoided until it is demonstrated that conservation goals for the particular species are met. Impacts to rare plants and populations of smooth tarplant would be mitigated through SCE's participation in the MSHCP (APM BIO-4) and Mitigation Measures identified in this EIR. Specifically, Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), B-3a (Implement Weed Control Measures), and B-6 (Conduct Surveys for Sensitive Plant Species and Flag for Avoidance) are recommended. Implementation of these measures would reduce impacts to sensitive plant species to a less-than-significant level (Class II).

Mitigation Measures for Impact B-11

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-3a Implement Weed Control Measures

B-6 Conduct Surveys for Sensitive Plant Species and Flag for Avoidance

Wildlife

A variety of sensitive wildlife species are known to occur in the Route Alternative Option 3 alignment. The large majority of the observed species are birds; however, several small mammals and reptiles were also observed. Because the alternative shares a large portion of the Proposed Project ROW and supports the same habitat types, the same types of species are likely to occur. Some of these species include the coast horned lizard, Los Angeles pocket mouse, black-tailed jackrabbit, and various song

birds and raptors such as Swainson's thrush, yellow warbler, Northern harrier, and Cooper's hawk. Potential impacts to sensitive wildlife species would be similar to those discussed for the Proposed Project in Section D.4.5.3.

Impact B-12: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II)

Invertebrates. Sensitive invertebrate species were not observed along the alternative Project route and are not expected to occur. Consequently, impacts to sensitive invertebrates would be considered less than significant (Class III).

Fishes. Fish considered protected by the CDFG or MSHCP are not expected to occur in the Project area. No impacts would occur to sensitive fishes.

Amphibians. Similar to the Proposed Project, western spadefoot toad may occur in the alternative Project alignment. Spadefoot toads are a Covered Species under the MSHCP and impacts to this species are fully mitigated through APM Bio-4 (SCE Compliance with MSHCP Requirements) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance). Through compliance with these measures impacts to spadefoot toads would be considered less than significant (Class II).

Mitigation Measure for Impact B-12

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

Impact B-13: The Project would result in the loss of special-status reptile species (Class II).

Reptiles. Alluvial fan scrub, coastal sage scrub, and chaparral communities are known to support numerous sensitive reptiles and are present under this alternative alignment. Impacts to the same species identified for the Proposed Project may occur. These species include the coast horned lizard, silvery legless lizard, San Bernardino mountain kingsnake, coast patch-nosed snake, two-striped garter snake, and orange-throated whiptail.

Direct effects to these reptiles may occur from construction activity as a result of mechanical crushing; loss of nesting, breeding, or basking sites; and human trampling. Disturbance would be associated with the removal of vegetation, excavation of soils, and construction adjacent to areas that support these species. Indirect effects to these species include increased predation from night lighting, compaction of soils, degradation to water quality, and the introduction of exotic plant species.

Impacts to these species would be considered significant absent mitigation (Class II). SCE has indicated that implementation of APM BIO-12 would reduce impacts to sensitive species at the Mill Creek communication site by limiting construction activities to disturbed habitat, and APM BIO-8 (Utilize a Frac-out Contingency Plan) to reduce impacts to aquatic resources in San Timoteo Creek. The following Mitigation Measures are recommended to reduce impacts to sensitive non-covered reptiles to less-than-significant levels (Class II): Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-3a (Implement Weed Control Measures), B-13a (Conduct Pre-construction Surveys and Relocate Sensitive Reptiles), and B-13b (Monitor and Relocate Species during Grading of Substation).

Mitigation Measures for Impact B-13

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-3a Implement Weed Control Measures

B-13a Conduct Pre-Construction Surveys and Relocate Sensitive Reptiles

B-13b Monitor and Relocate Species during Grading of Substation

Impact B-14: The Project would result in the loss of burrowing owls.

Burrowing owls were not observed in either the Proposed or alternative alignments. However these species are known to occur in the region and could occupy the Project area prior to construction. If burrowing owls are present within a construction zone, or adjacent to such an area, disturbance could destroy occupied burrows or cause the owls to abandon their burrows. Construction during the breeding season could also result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment and would constitute a significant impact absent mitigation. Burrowing owls are a Criteria Species under the MSHCP and if detected during surveys, 90 percent of those portions of the property that provide for the long-term conservation of the species must be avoided.

Impacts to this species would be the same as the Proposed Project. To reduce impacts to this species SCE would implement APM BIO-4 which requires MSHCP compliance. SCE would conduct pre-construction surveys prior to construction of the Route Alternative Option 3 and if it is determined that the 90 percent avoidance threshold cannot be met for the burrowing owl, a Determination of Biologically Equivalent or Superior Preservation must be prepared in accordance with guidelines set forth in Section 6.3.2 of the MSHCP. The CPUC would monitor compliance with this act through the implementation of Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), and impacts to burrowing owls would be considered less than significant.

Mitigation Measure for Impact B-14

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

Impact B-15: The Project would result in the loss of foraging habitat or disruption of nesting for special-status raptor species (Class II).

This alternative would result in the same types of impacts to special-status raptor as the Proposed Project. Similar to the Proposed Project, numerous special-status bird species have the potential to occur in the alternative ROW. Some of these include golden eagle, sharp-shinned hawk, merlin, Cooper's hawk, and northern harrier. White-tailed kite and prairie falcon also have the potential to forage and nest in and adjacent to the ROW. Impacts to foraging and nesting habitat for special-status bird species would be the same impacts as the Proposed Project. Through SCE's participation in the MSHCP, impacts to most bird species would be mitigated as the MSHCP provides coverage for specific species which includes take authorization through the MBTA. As described under Impact B-4, SCE has indicated that measures identified in APM BIO-2, including monitoring and avoidance, would reduce these impacts; however, there is still a potential for take to occur. To reduce impacts to less-than-significant levels, Mitigation Measures B-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds), is recommended to ensure that impacts to sensitive birds are reduced to a less-than-significant level (Class II).

Mitigation Measure for Impact B-15

B 4 Conduct Pre-Construction Surveys and Monitoring for Breeding Birds

Impact B-16: The Project would result in electrocution of special-status bird species (Class II).

Impacts to special-status birds would be the same as the Proposed Project. Potential impacts to birds from electrocution are discussed under Impact B-9. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1-kV and 69-kV and “the likelihood of electrocutions occurring at voltages greater than 69-kV is extremely low” (APLIC, 1996) and would be considered a less-than-significant impact with the implementation of Mitigation Measure B-9 (Construct to 2006 APLIC Guidelines) (Class II).

Mitigation Measures for Impact B-16

B-9 Construct to 2006 APLIC Guidelines

Impact B-17: The Project would result in subtransmission line collision by special-status bird species (Class II).

Potential impacts to birds from collisions with the electrical line are discussed under Impact B-10 and would be the same as the Proposed Project. Implementation of Mitigation Measure B-10 (Utilize Collision-Reducing Techniques) would reduce this impact to a less-than-significant level (Class II).

Mitigation Measures for Impact B-17

B-10 Utilize Collision-Reducing Techniques

Mammals

This alternative supports the same plant associates as the Proposed Project and several sensitive mammal species are expected to occur along the ROW. As with the Proposed Project these include several species of bats, black-tailed jack rabbit, badger, and coyote.

Impact B-18: The Project would result in the loss of the American badger (Class II).

Impacts to badgers would be the same as the Proposed Project. Habitat for the American badger is present in many sections of this alternative including the open fields north of Banning. This species is not covered by the MSHCP and impacts would be considered significant absent mitigation (Class II). To reduce impacts to this species, if present, Mitigation Measure B-18 (Avoid Active Burrows or Nests and Relocate during the Non-breeding Season) is recommended.

Mitigation Measure for Impact B-18

B-18 Avoid Active Burrows or Nests and Relocate during the Non-breeding Season.

Impact B-19: The Project would result in loss of special-status rodent species (Class II).

Route Alternative Option 3 would cross habitat that could support several sensitive rodent species. These include the Los Angeles pocket mouse, San Diego pocket mouse, and San Diego desert wood rat. Some of these species, including the two species of pocket mouse, are known to occur in the wash habitat at Little San Gorgonio Creek which is spanned by the subtransmission line in the city of Beaumont.

Impacts to sensitive rodents would be largely the same as the Proposed Project. Under this alternative some wash habitat at Smith Creek would be avoided as the subtransmission line between the Maraschino substation and Banning substation would not be constructed. However, this alternative would require

crossing the little San Gorgonio Creek which is defined as a Must Survey Area for Los Angeles pocket mouse by the MSHCP (RCIP, 2003). The Los Angeles pocket mouse is a Criteria Species under the MSHCP and requires 90 percent avoidance of those portions of the property that provide for the long-term conservation of the species. As with the Proposed Project, SCE would avoid most of the habitat utilized by this species; however, several poles are present within wash habitat occupied by this species. To reduce impacts to this species SCE would implement APM BIO-4 which requires MSHCP compliance. SCE would conduct pre-construction surveys prior to construction of the Project, and if it is determined that the 90 percent avoidance threshold cannot be met for the pocket mouse, a Determination of Biologically Equivalent or Superior Preservation must be prepared in accordance with guidelines set forth in Section 6.3.2 of the MSHCP. The CPUC would monitor compliance with this act through the implementation of Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance). In addition, Mitigation Measure B-19 (Avoid Burrow Areas) is recommended to reduce impacts to less-than-significant levels (Class II).

Mitigation Measures for Impact B-19:

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-19 Avoid Burrow Areas.

D.4.6.2.4 Impacts to Jurisdictional Waters and Wetlands

Impact B-20: The Project would result in the loss of jurisdictional waters and wetlands (Class II).

The Route Alternative Option 3 contains portions of the Proposed Project ROW from the El Casco substation site to the Maraschino substation. As described in Section D.4.1.4.7 (Jurisdictional Waters) several waterways cross the alignment in this area including San Timoteo Creek and Potrero Creek. The Route Alternative Option 3 would also cross portions of little San Gorgonio Creek, Banning Creek, and various unnamed blue-line streams and ephemeral drainages. A formal wetland delineation of jurisdictional waters has not been conducted for the northern portion of the subtransmission line route and would be required for compliance with the MSHCP and the State and federal Clean Water Acts.

Impacts to jurisdictional waters would be very similar to the Proposed Project. The primary impacts to jurisdictional waters would occur at and near the El Casco substation site. Similarly, impacts would be the same as the Proposed Project where the LWS and TSP structures occur at Potrero Creek west of the Maraschino substation. Similar to the Proposed Project this alternative is not expected to result in permanent impacts to federally protected wetlands.

As with the Proposed Project SCE is required by State and federal law to comply with the regulations regarding conducting Project activities in water bodies under the jurisdiction of the State and federal government. As such SCE would obtain required permits pursuant to Sections 401 and 404 of the CWA and the State Porter-Cologne Act and CDFG Code 1602. SCE would also comply with the provisions of the MSHCP regarding avoidance and minimization to riparian areas. To further reduce impacts to less-than-significant levels (Class II), SCE would implement Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance).

Mitigation Measures for Impact B-20

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

D.4.6.2.5 Impacts to Movement of Fish, Wildlife Movement Corridors, or Native Wildlife Nursery Sites

This alternative is located in the same region as the Proposed Project and impacts to wildlife movement are presented in detail in Section D.4.5.6. This alternative includes the proposed 28-acre El Casco Substation site and is located in the Constrained Linkage Area 22. As explained for the Proposed Project, San Timoteo Creek is a critical corridor for wildlife movement in the region. The San Timoteo riparian corridor and adjacent uplands allow the movement of wildlife within specific areas but movement is constrained by SR-60, San Timoteo Canyon Road, the existing railroad line, and I-10. The Route Alternative Option 3 would also include a new line within an existing utility corridor that crosses segments of open space and urbanized areas in the cities of Calimesa, Beaumont, and Banning.

Impact B-21: The Project would result in the loss or restriction of habitat connectivity in Constrained Linkage 22 (Class II).

With the exception of the proposed El Casco Substation, this alternative would not substantially interfere with the movement of any native resident or migratory fish species. The existing line would not constitute a barrier to movement and in many places the line passes through areas subject to rapid urbanization. As with the Proposed Project, the existing utility corridor is the remaining open space between habitat blocks and likely provides some dispersal pathways to mobile wildlife species. However, urbanized areas can be effective blocks to wildlife movement through a combination of noise, lighting, human disturbance, and predation by domestic pets including house cats and dogs.

Riparian or wash habitat would also be spanned by the ROW, and where the LWS and TSPs would be placed within a wash, impacts would be short term and would not substantially alter the existing conditions at the site. Similarly, electrical subtransmission lines have very limited footprints and do not result in a physical barrier to wildlife movement. As such, impacts from the subtransmission line would be less than significant (Class III).

The construction of the El Casco substation would result in the loss of habitat adjacent to San Timoteo Creek and could further degrade the already restricted corridors that occur in this area. Similar to the Proposed Project, this would directly impact Proposed Habitat Linkage Elements 12 and 22 of the MSHCP, which are situated within the Norton Younglove Reserve. Construction of the proposed substation would result in significant impacts to this linkage absent mitigation (Class II).

Impacts from substation construction associated with this alternative would be mitigated as described for the Proposed Project. Provided SCE implements AMP BIO-4, which requires compliance with the MSHCP, impacts to this Criteria Area and Linkage 22 would be considered fully mitigated through the MSHCP. To further reduce impacts to wildlife movement in the Project area SCE would implement APMs BIO-5 (Dust Control) and BIO-7 (Directional Substation Lighting). The following Mitigation Measures are also recommended: B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), B-5a (Reduce Noise Levels during Construction), B-5b (Use Magnetic Coils at Entrance Gate), and B-5c (Use Shielded Lighting and Schedule Daylight Maintenance). Although adverse, these impacts would be reduced to less-than-significant levels (Class II).

Mitigation Measures for Impact B-21

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-5a Reduce Noise Levels during Construction

B-5b Use Magnetic Coils at Entrance Gate

B-5c Use Shielded Lighting and Schedule Daylight Maintenance

D.4.6.2.6 Conflict with Local Policies or Ordinances Protecting Biological Resources

Impact B-22: The Project would conflict with the MSHCP (Class II).

The Route Alternative Option 3 is located within the same portions of the Pass Area Plan and the Reche Canyon/Badlands Area Plan as the Proposed Project. In addition, as this alternative shares a portion of the same alignment as the Proposed Project, this alternative has portions that lie inside and outside of the same Criteria Areas as described for the Proposed Project. These include Criteria Cells 569, 572, 662, 753, 936, 1024, and 1032. Table D.4-1 provides a summary of the MSHCP conservation focus for the areas of the Proposed Project, which would be the same for Route Alternative Option 3.

As this alternative shares the same portions of the MSHCP Criteria cells as the Proposed Project; survey areas for Covered Species would require the completion of the same surveys as required for the Proposed Project. These areas are discussed in Section C.3.1.3, Survey Methodology, above. These surveys have not yet been completed and would be required prior to approval of the project. Provided SCE has complies with the provisions of the MSHCP, impacts would be considered less than significant with the implementation of APM BIO-4 which requires MSHCP compliance and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) (Class II).

Mitigation Measure for Impact B-22

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

D.4.7 Partial Underground Alternative

The Partial Underground Alternative is identical to the Proposed Project except under this alternative, a one mile segment of the subtransmission line, from approximately MP 9.0 to MP 10.0, would be installed underground.

D.4.7.1 Partial Underground Alternative – Environmental Setting

D.4.7.1.1 Literature Review

This alternative is located within the same area as the Proposed Project. Therefore, the information from the literature search that was conducted for the Proposed Project was utilized to provide information for this alternative.

D.4.7.1.2 Survey Methodology

Field surveys for sensitive plants and wildlife were conducted as part of the Proposed Project. As this Alternative is located in the exact same ROW as the Proposed Project, no additional surveys were conducted for this alternative.

D.4.7.1.3 Partial Underground Existing Conditions

The affected environment for the Partial Underground Alternative is the same as the Proposed Project. The underground alternative would follow the exact same route as the Proposed Project, with the exception of the underground segment through the Sun Lakes Community, located in the City of Banning.

The proposed underground segment would be constructed in an existing golf course. This area is dominated by turf grasses and ornamental plantings, including some native trees. Urbanized settings including golf courses can support sensitive wildlife that opportunistically use these areas for foraging or roosting. However, overall species diversity is typically lower in these areas due to routine maintenance, herbicide and chemical fertilization, and the ongoing level of human activity. As described above, this alternative supports the same plant and wildlife species as the Proposed Project.

D.4.7.2 Partial Underground Alternative – Environmental Impacts and Mitigation Measures

D.4.7.2.1 Impacts to Riparian or Sensitive Natural Communities

Impact B-1: The Project would cause temporary or permanent loss of native vegetation communities (Class II).

Construction of the Partial Underground Alternative would result in the same impacts to native vegetation communities as the Proposed Project. With the exception of the one-mile section that would be trenched through the community of Sun Lakes, the exact same impacts to vegetation would occur. The underground segment through Sun Lakes consists of a golf course and native plant communities would not be impacted.

Construction-related activities from this alternative would be similar to the Proposed Project and impacts would be considered significant absent mitigation. Similar to the Proposed Project, SCE would mitigate the loss of vegetation through the implementation of the MSHCP process. APM BIO-4 indicates SCE would comply with all regulations outlined in the MSHCP. In addition to the APMs proposed by SCE (APM BIO-1 and APM BIO-4), potential impacts to native vegetation would be reduced to a less-than-significant level (Class II) through implementation of Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance).

Mitigation Measures for Impact B-1

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

Impact B-2: The Project would cause loss of foraging or breeding habitat for wildlife (Class II).

The Partial Underground Alternative supports the exact same foraging habitat for birds, small mammals, and reptiles as the Proposed Project. This alternative is located in the same footprint as the Proposed Project, and impacts would be the same as the Proposed Project.

Similar to the Proposed Project impacts to vegetation communities and habitat utilized as foraging habitat by sensitive wildlife would be considered significant absent mitigation. As with the Proposed Project, these impacts would be mitigated through the implementation of APMs BIO-1 and BIO-4.

Implementation of Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) would reduce Impact B-2 to a less-than-significant level (Class II).

Mitigation Measures for Impact B-2

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

Impact B-3: The Project would introduce non-native and invasive plant species (Class II).

The Partial Underground Alternative is located in the same ROW as the Proposed Project and contains the same non-native vegetation, including noxious and invasive weeds, as the Proposed Project. The spread of noxious plant species across the ROW would be considered a significant impact absent mitigation (Class II). Mitigation would be the same as the Proposed Project and would require the implementation of the Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), B-3a (Implement Weed Control Measures), and B-3b (Landscape with Native or Non-invasive Plant Species) to reduce potential impacts from the introduction of non-native plant species to a less-than-significant level (Class II).

Mitigation Measures for Impact B-3

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-3a Implement Weed Control Measures

B-3b Landscape with Native or Non-invasive Plant Species

Impact B-4: The Project would result in a loss of nesting birds (Class II).

The Partial Underground Alternative contains exactly the same foraging and nesting habitat for both resident and migratory birds as the Proposed Project. Displacement of native birds, raptors, or burrowing owls during the breeding season would be considered a significant impact without mitigation.

As with the Proposed Project most of the birds present in the Project area are covered under the MSHCP and impacts to these species would be mitigated through SCE's participation in the program. To further reduce potential impacts to nesting birds and raptors SCE would implement APM BIO-2, which requires scheduling major ground disturbance outside the breeding season for nesting birds. To reduce impacts to less-than-significant levels, SCE would implement Mitigation Measures B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) and B-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds). Implementation of these mitigation measures would ensure that violation of the MBTA does not occur and would reduce impacts to nesting birds to an adverse, but less-than-significant level (Class II).

Mitigation Measures for Impact B-4

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-4 Conduct Pre-Construction Surveys and Monitoring for Breeding Birds

Impact B-5: The Project would result in permanent disturbance to wildlife at the proposed El Casco Substation site due to noise and increased human presence (Class II).

The Partial Underground Alternative contains the same project elements as the Proposed Project and would include the construction and operation of the El Casco Substation. This would create the same types of impacts to wildlife from noise, light, and human disturbance as the Proposed Project. Impacts to wildlife in or near the proposed substation site from noise, lighting, and human disturbance would be fully mitigated through compliance with the MSHCP and the implementation of APMs and Mitigation Measures. Mitigation Measures B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), B-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds), B-5a (Reduce Noise Levels during Construction), B-5b (Use Magnetic Coils at Entrance Gate), and B-5c (Use Shielded Lighting and Schedule Daylight Maintenance) are recommended to reduce impacts to wildlife to less-than-significant levels (Class II).

Mitigation Measures for Impact B-5:

- B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance**
- B-4 Conduct Pre-Construction Surveys and Monitoring for Breeding Birds**
- B-5a Reduce Noise Levels during Construction**
- B-5b Use Magnetic Coils at Entrance Gate**
- B-5c Use Shielded Lighting and Schedule Daylight Maintenance**

D.4.7.2.2 Impacts to Endangered or Threatened Species, or Proposed or Critical Habitat

Vegetation

The Partial Underground Alternative contains the same potential to support listed plant species as the Proposed Project. As with the Proposed Project, although listed plant species were not observed and numerous surveys have been completed in the Project ROW, there remains a potential for some sensitive plants to occur.

Impact B-6: Construction activities would result in indirect or direct loss of listed plants (Class II).

The Partial Underground Alternative would be subject to the same types of ground-disturbing activity as the Proposed Project. The loss of listed plant species would occur from the construction of the proposed substation, the placement of LWS and TSPs, grading of new access roads, maintenance of construction equipment and supplies, staging of equipment and materials, and use or improvement of existing access roads.

To reduce potential impacts to listed plant species the same mitigation measure is recommended as for the Proposed Project. SCE would also implement APM BIO-4 which compliance with the MSHCP regarding Narrow Endemic Plant Species. Implementation of the APMs described for the Proposed Project and the implementation of Mitigation Measure B-6 (Conduct Surveys for Sensitive Plant Species and Flag for Avoidance) would ensure impacts to listed plants remain less-than-significant (Class II).

Mitigation Measure for Impact B-6

- B-6 Conduct Surveys for Sensitive Plant Species and Flag for Avoidance**

Wildlife

The Partial Underground Alternative occurs in the same ROW as the Proposed Project. Some of the listed species observed in the Project area include southwestern willow flycatcher, northwestern willow flycatcher, least Bell's vireo, western yellow-billed cuckoo, and peregrine falcon. Species with a potential to occur include Swainson's hawk and coastal California gnatcatcher. San Bernardino kangaroo rat and Stephens's kangaroo rat have the same potential to occur as the Proposed Project. Critical habitat for listed wildlife does not occur in the Project area.

Impacts to listed species would be same as described for the Proposed Project. As the subtransmission line crosses the same habitat types as the Proposed Project, direct impacts to wildlife would include the removal of vegetation and subsequent loss of wildlife habitat. While trenching would occur in the Sun Lakes Golf course this area is not expected to support State or federally listed species.

Impact B-7: Construction activities would result in indirect or direct loss of Quino Checkerspot habitat (Class II).

Invertebrates. The Partial Underground Alternative is located in the exact same alignment as the Proposed Project and there is no indication that listed invertebrates occur within the ROW. However, Quino Checkerspot butterfly has some potential to occur based on habitat maps included within the MSHCP. Direct impacts to this species could occur, if present, by removing host plants required by this species. This is a fully Covered Species under the MSHCP with no survey requirements. The MSHCP monitors take of this species through the documentation of habitat loss.

Potential indirect effects to the species would be the same as the Proposed Project and could occur from the spread of noxious or invasive weeds that degrade habitat utilized by this species. Impacts to this species are fully mitigated through SCE's participation in the MSHCP. Implementation of APM BIO-4, which requires MSHCP compliance and Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), and B-3 (Implement Weed Control Measures) would reduce potential impacts to this species to a less-than-significant level (Class II).

Mitigation Measures for Impact B-7

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-3a Implement Weed Control Measures

Fishes. The Partial Underground Alternative would have the same potential impacts to San Timoteo Creek as the Proposed Project. There is no indication that listed fish occur in the alignment of this alternative and impacts are not expected to occur.

Amphibians. Listed amphibians are not known to occur within the Partial Underground Alternative alignment. Impacts to listed amphibians would be the same as the Proposed Project and would be considered less than significant (Class III).

Reptiles. The Partial Underground Alternative is not known to support any listed reptiles. The closest location for listed reptiles is the dune areas of the Coachella Valley located outside the Project area. Therefore impacts to listed reptiles are not expected to occur and would be the same as the Proposed Project (Class III).

Birds. The Partial Underground Alternative includes the same project components as the Proposed Project. Therefore the same listed species have the potential to occur in this alternative. Therefore this alternative could result in same type of impacts to listed birds as the Proposed Project.

Impact B-8: The Project would result in habitat loss or disturbance to listed birds, including migratory birds and raptors (Class II).

The Partial Underground Alternative is located in the same location as the Proposed Project. Southwestern willow flycatchers, northwestern willow flycatchers, Western yellow-billed cuckoo, and least Bell's vireos were documented to occur in San Timoteo Creek immediately adjacent to the proposed substation site.

Project activities for this alternative would be the same as described for the Proposed Project. The listed bird species present in the proposed alternative are considered Covered Species under the MSHCP. Through participation in the MSHCP impacts to these species would be considered fully mitigated. To further reduce potential impacts to nesting birds and raptors SCE would implement APM BIO-2 which requires scheduling major ground disturbance outside the breeding season for nesting birds (generally between September 1 and January 31). To reduce impacts to less than significant levels for species not covered by the MSHCP, including California Fully Protected species, the following Mitigation Measures are recommended: B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) and B-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds). Implementation of these Mitigation Measures would ensure that impacts to listed birds are reduced to a less-than-significant level (Class II).

Mitigation Measures for Impact B-8

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-4 Conduct Pre-construction Surveys and Monitoring for Breeding Birds

Mammals

The Partial Underground Alternative has the same potential to support sensitive mammals as the Proposed Project. Two State or federally listed mammal species have limited potential to occur in or adjacent to the alternative, including San Bernardino kangaroo rat and Stephens' kangaroo rat. As part of the MSHCP Must Survey Requirement, SCE conducted focused surveys for San Bernardino kangaroo rat and other small mammals in the Proposed Project area in 2007 (Jones & Stokes, 2007). These surveys were completed for sections of the ROW that were the same as the Proposed Project. Focused surveys for these species were not complete for the northerly alignment.

This survey did not detect these species and the report concluded that Riversidean alluvial fan sage scrub in the Project area is too disturbed and fragmented to support these species. As with the Proposed Project, 14 acres of potentially suitable habitat for Stephen's kangaroo rat, a federally-listed species, would be permanently disturbed by the Partial Underground Alternative. This habitat is mostly associated with the proposed El Casco Substation site. However, this species was not observed in the Project area and overall habitat conditions at the Project site are not favorable. Habitat conditions in the Project area are not suited for Stephen's kangaroo rat and this species is not expected to occur (Haas, 2007). However, because this species is fully covered under the MSHCP and surveys are not required; if present, activities that result in the loss of habitat would be fully mitigated through the MSHCP process.

Similar to the Proposed Project, impacts to these species, if present, would be fully mitigated through the existing MSHCP development fee structure. Impacts to listed mammals would be further reduced through Mitigation Measure B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance). Mitigation Measure B-3 (Implement Weed Control Measures) would further reduce indirect impacts to listed mammals by reducing the potential for the propagation of noxious weeds.

Impact B-9: The Project would result in the electrocution of listed bird species (Class II).

Impacts to sensitive birds from electrocution would be the same as the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels less than 69 kV (APLIC, 2006; Manville II², 2005). The Project's voltage levels are 115 kV, so the likelihood of electrocution is low based on SCE's commitment to construct raptor-safe LWS and TSPs. In addition, as with the Proposed Project this alternative would be constructed with revised and updated APLIC guidelines as required in Mitigation Measure B-9 (Construct to 2006 APLIC Guidelines). Therefore, impacts would be the same as the Proposed Project and would be considered less than significant (Class II).

Mitigation Measure for Impact B-9

B-9 Construct to 2006 APLIC Guidelines

Impact B-10: The Project would result in subtransmission line collisions by listed bird species (Class II).

Potential impacts from bird collisions would be the same as the Proposed Project. As with the Proposed Project, implementation of Mitigation Measure B-10 (Utilize Collision-Reducing Techniques) would minimize the potential for line collisions by listed and sensitive bird species such that impacts would be reduced to a less-than-significant level (Class II).

Mitigation Measure for Impact B-10

B-10 Utilize Collision-Reducing Techniques

D.4.7.2.3 Impacts to Candidate, Sensitive, or Special-Status Species

Impact B-11: The Project would result in the loss of special-status plant species (Class II).

Construction-related impacts to sensitive plant species would be the same as described for the Proposed Project. Ground-disturbing activity, including construction of the El Casco Substation would result in the loss smooth tarplants that occur within the construction footprint. Tower pad preparation and construction, tower removal, and use or improvement of existing access roads has the potential to disturb sensitive plant species in other areas. Indirect impacts can include the spread of noxious or invasive weeds.

Similar to the Proposed Project, SCE is required by the MSHCP to avoid populations of Criteria Species. Impacts to rare plants and populations of smooth tarplant would be mitigated through SCE's participation in the MSHCP (APM BIO-4) and Mitigation Measures identified in this EIR. Specifically Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), B-3a (Implement Weed Control Measures), and B-6 (Conduct Surveys for Sensitive Plant Species and Flag for Avoidance) would reduce impacts to sensitive plant species to a less-than-significant level (Class II).

Mitigation Measures for Impact B-11

- B-1a** **Prepare and Implement a Habitat Restoration/Compensation Plan**
- B-1b** **Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance**
- B-3a** **Implement Weed Control Measures**
- B-6** **Conduct Surveys for Sensitive Plant Species and Flag for Avoidance.**

Wildlife

The Partial Underground Alternative supports the same sensitive wildlife species as the Proposed Project. Some of these species include the coast horned lizard, small mammals such as Los Angeles pocket mouse and black-tailed jackrabbit, and various song birds and raptors such as Swainson's thrush, yellow warbler, Northern harrier, and Cooper's hawk. Potential impacts to sensitive wildlife species would be the same to those discussed for the Proposed Project in Section D.4.5.3.

Impact B-12: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II)

Invertebrates. Sensitive invertebrate species were not observed along the Partial Underground Alternative route and are not expected to occur. Consequently, impacts to sensitive invertebrates would be considered less than significant (Class III).

Fishes. Fish considered protected by the CDFG or MSHCP are not expected to occur in the Project area.

Amphibians. Similar to the Proposed Project western spadefoot toad may occur in the Partial Underground Alternative alignment. Spadefoot toads are a Covered Species under the MSHCP and impacts to this species would be fully mitigated through APM Bio-4 (SCE Compliance with MSHCP Requirements) and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance). Through compliance with these measures impacts to spadefoot toads would be considered less than significant (Class II).

Mitigation Measure for Impact B-12

- B-1b** **Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance**

Impact B-13: The Project would result in the loss of special-status reptile species (Class II).

Reptiles. This alternative is located in the same ROW as the Proposed Project and the same species identified for the Proposed Project may occur. These species include the coast horned lizard, silvery legless lizard, San Bernardino mountain kingsnake, coast patch-nosed snake, two-striped garter snake, and orange-throated whiptail.

Impacts to these species would be considered significant absent mitigation. SCE has indicated that implementation of APM BIO-12 would reduce impacts to sensitive species at the Mill Creek communication site by limiting Project-related disturbance to already disturbed habitat and APM BIO-8 (Utilize a Frac-out Contingency Plan) to reduce impacts to aquatic resources in San Timoteo Creek. The following Mitigation Measures are also recommended to reduce impacts to sensitive non-covered reptiles to less-than-significant levels (Class II): Mitigation Measures B-1a (Prepare and Implement a

Habitat Restoration/Compensation Plan), B-3a (Implement Weed Control Measures), B-13a (Conduct Pre-construction Surveys and Relocate Sensitive Reptiles), and B-13b (Monitor and Relocate Species during Grading of Substation).

Mitigation Measures for Impact B-13

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-3a Implement Weed Control Measures

B-13a Conduct Pre-construction Surveys and Relocate Sensitive Reptiles

B-13b Monitor and Relocate Species during Grading of Substation

Impact B-14: The Project would result in the loss of burrowing owls (Class II).

Burrowing owls were not observed in the Proposed Project alignment. However, these species are known to occur in the region and could occupy the Project area prior to construction. Impacts to this species would be the same as the Proposed Project. To reduce impacts to this species SCE would implement APM BIO-4 which requires MSHCP compliance. SCE would conduct pre-construction surveys prior to construction of the Partial Underground Alternative, and if it is determined that the 90 percent avoidance threshold cannot be met for the burrowing owl, a Determination of Biologically Equivalent or Superior Preservation must be prepared in accordance with guidelines set forth in Section 6.3.2 of the MSHCP. The CPUC would monitor compliance with this act through the implementation of Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance).

Mitigation Measure for Impact B-14

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

Impact B-15: The Project would result in the loss of foraging habitat or disruption of nesting for special-status raptor species (Class II).

This alternative would result in the same impacts to special-status raptor species as the Proposed Project. This alternative occurs in the same alignment as the Proposed Project and supports the same species identified for the Proposed Project. Some of these include golden eagle, sharp-shinned hawk, merlin, Cooper's hawk, and northern harrier. White-tailed kite and prairie falcon also have the potential to forage and nest in and adjacent to the ROW. Impacts to foraging and nesting habitat for special-status bird species would be the same impacts as the Proposed Project.

To reduce these impacts to less-than-significant levels, Mitigation Measure B-4 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) is recommended. Implementation of this mitigation measure would ensure that impacts to sensitive raptors are reduced to a less-than-significant level (Class II).

Mitigation Measure for Impact B-15

B-4 Conduct Pre-Construction Surveys and Monitoring for Breeding Birds

Impact B-16: The Project would result in electrocution of special-status bird species (Class II).

Impacts to special-status birds would be the same as the Proposed Project. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1-kV and 69-kV and "the likelihood of electrocutions occurring at voltages greater than 69-kV is extremely low" (APLIC, 1996).

This would be considered a less-than-significant impact with the implementation of Mitigation Measure B-9 (Construct to 2006 APLIC Guidelines) (Class II).

Mitigation Measure for Impact B-16

B-9 Construct to 2006 APLIC Guidelines

Impact B-17: The Project would result in subtransmission line collisions by special-status bird species (Class II).

Potential impacts to birds from collisions with the electrical line would be the same as the Proposed Project. Implementation of Mitigation Measure B-10 (Utilize Collision-Reducing Techniques) would reduce this impact to a less-than-significant level (Class II).

Mitigation Measure for Impact B-17

B-10 Utilize Collision-Reducing Techniques

Mammals

The Partial Underground Alternative is located in the same ROW as the Proposed Project. The same sensitive mammal species would occur along the Partial Underground Alternative. As with the Proposed Project, these include several species of bats, black-tailed jackrabbit, badgers, and coyote.

Impact B-18: The Project would result in the loss of the American badger (Class II).

Impacts to badgers would be the same as the Proposed Project. This species is not covered by the MSHCP and impacts would be considered significant absent mitigation (Class II). To reduce impacts to this species, if present, Mitigation Measure B-18 (Avoid Active Burrows or Nests and Relocate during the Non-Breeding Season) is recommended.

Mitigation Measure for Impact B-18

B-18 Avoid Active Burrows or Nests and Relocate during the Non-Breeding Season.

Impact B-19: The Project would result in loss of special-status rodent species (Class II).

This alternative supports that same sensitive rodent species as the Proposed Project. These include the Los Angeles pocket mouse, San Diego pocket mouse, and San Diego desert wood rat. Impacts to sensitive rodents would be the same as the Proposed Project.

The Los Angeles pocket mouse is a Criteria Species under the MSHCP and requires 90 percent avoidance if present. To reduce impacts to this species SCE would implement APM BIO-4 which requires MSHCP compliance. The CPUC would monitor compliance with this act through the implementation of Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance). In addition, Mitigation Measure B-19 (Avoid Burrow Areas) is recommended to reduce impacts to less-than-significant levels (Class II).

Mitigation Measure for Impact B-19

B-19 Avoid Burrow Areas.

D.4.7.2.4 Impacts to Jurisdictional Waters and Wetlands

Impact B-20: The Project would result in the loss of jurisdictional waters and wetlands (Class II).

The Partial Underground Alternative contains the same jurisdictional waters as the Proposed Project, and impacts to jurisdictional waters would be the same as the Proposed Project. The primary impacts to jurisdictional waters would occur at and near the El Casco substation site.

As with the Proposed Project, SCE is required by State and federal law to comply with the regulations regarding conducting Project activities in water bodies under the jurisdiction of the State and federal government. As such SCE would obtain required permits pursuant to section 401 and 404 of the CWA and the State Porter-Cologne Act and CDFG Code 1602. SCE would also comply with the provisions of the MSHCP regarding avoidance and minimization to riparian areas. To further reduce impacts to less-than-significant levels (Class II), Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan) and B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) are recommended.

Mitigation Measures for Impact B-20

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

D.4.7.2.5 Impacts to Movement of Fish, Wildlife Movement Corridors, or Native Wildlife Nursery Sites

This alternative is located in the same location as the Proposed Project and includes the same components as the Proposed Project, including the proposed 28-acre El Casco Substation site, and is located in the Constrained Linkage Area 22.

Impact B-21: The Project would result in the loss or restriction of habitat connectivity in Constrained Linkage 22 (Class II).

Impacts to wildlife movement would be the same as the Proposed Project. With the exception of the proposed El Casco Substation this alternative would not substantially interfere with the movement of any wildlife species. Construction of the proposed substation would result in significant impacts to this linkage absent mitigation (Class II).

Impacts from substation construction would be mitigated as described for the Proposed Project. Provided SCE implements AMP BIO-4, which requires compliance with the MSHCP, impacts to this Criteria Area and Constrained Linkage 22 would be considered fully mitigated through the MSHCP. To further reduce impacts to wildlife movement in the Project area, SCE would implement APMs BIO-5 (Dust Control) and BIO-7 (Directional Substation Lighting). Mitigation Measures B-1a (Prepare and Implement a Habitat Restoration/Compensation Plan), B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance), B-5a (Reduce Noise Levels during Construction), B-5b (Use Magnetic Coils at Entrance Gate), and B-5c (Use Shielded Lighting and Schedule Daylight Maintenance) would also be recommended to reduce these impacts to less-than-significant levels (Class II).

Mitigation Measures for Impact B-21

B-1a Prepare and Implement a Habitat Restoration/Compensation Plan

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

B-5a Reduce Noise Levels during Construction

B-5b Use Magnetic Coils at Entrance Gate

B-5c Use Shielded Lighting and Schedule Daylight Maintenance

D.4.7.2.6 Conflict with Local Policies or Ordinances Protecting Biological Resources

The Partial Underground Alternative is located in the same location as the Proposed Project and is located in the The Pass Area Plan and The Reche Canyon/Badlands Area Plan area. In addition, this alternative is located in the same Criteria Areas as described for the Proposed Project. These include Criteria Cells 569, 572, 662, 753, 936, 1024, and 1032. Table D.4-1 provides a summary of the MSHCP conservation focus for the areas of the Proposed Project.

Impact B-22: The Project would conflict with the MSHCP (Class II).

This alternative is located in the exact same ROW as the Proposed Project, and with the exception of the one-mile segment of underground construction; this alternative contains the same elements as the Proposed Project. Therefore, provided SCE complies with the provisions of the MSHCP, impacts would be considered less than significant with the implementation of APM BIO-4 which requires MSHCP compliance and Mitigation Measure B-1b (Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance) (Class II).

Mitigation Measure for Impact B-22

B-1b Provide Documentation of Regulatory Permit Acquisition and MSHCP Compliance

D.4.8 No Project Alternative

Under the No Project Alternative, neither the Proposed Project nor the alternatives would be built and none of the impacts described above would occur. However, without the Proposed Project, SCE has indicated that the existing capacities at five distribution stations that are currently served by the Vista and Devers 115 kV Systems would be overloaded and subject to increased reliability concerns. To address the overload conditions in the Maraschino service area, SCE would require the addition of a third transformer at the substation and construction of two new 12 kV distribution lines (each about nine miles in length).

D.4.6.1 Environmental Impacts of the No Project Alternative

Although it is currently unknown where the 12 kV distribution lines would be constructed, it can be reasonably assumed that construction of these lines would likely result in similar impacts as the Proposed Project. Construction activities associated with the new 12 kV lines would likely occur in habitat similar to the Proposed Project as the Project region contains large areas of similar habitat. Based on the types of activities required to construct the new 12 kV lines, the impacts to biological resources would be similar to the Proposed Project. However, it is possible that the new lines could be constructed in areas that support higher densities of sensitive plants or wildlife, or occur in MSHCP criteria cells that require different mitigation or reporting. It is also possible that the route would occur in areas that would not be fully mitigated under the current MSHCP guidelines.

D.4.9 Mitigation Monitoring, Compliance, and Reporting Table

Table D.4-7 presents a summary of the impacts and proposed mitigation measures for biological resources for the Proposed Project and alternatives. All the mitigation measures identified for the Proposed Project would be applicable to each of the alternatives discussed in this EIR.

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
B-1: The Project would cause temporary or permanent loss of native vegetation communities (Class II).	<p>B-1a: Prepare and Implement a Habitat Restoration/Compensation Plan. SCE shall prepare and implement a Habitat Restoration/ Compensation Plan. The Plan shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> Restore all areas disturbed by Project construction, including temporary disturbance areas at the El Casco substation site, around structure construction sites, laydown/staging areas, temporary access and spur roads, and existing tower locations that are removed during construction of the Proposed Project. All grading activities at the proposed El Casco substation shall include topsoil salvage. Topsoil shall be removed, stockpiled on-site, and returned to the original site or used in habitat restoration activities elsewhere on the site. Where onsite restoration is planned for mitigation of temporary impacts to sensitive vegetation communities, SCE shall identify a qualified Habitat Restoration Specialist to be approved by the CPUC. Hydroseeding, drill seeding, or an otherwise proven restoration technique shall be utilized on all disturbed surfaces using a locally endemic native seed mix approved by the CPUC. The seed mix shall be consistent with the requirements of the MSHCP. The Plan shall include the applicable Best Management Practices identified in the MSHCP. For the permanent loss of riparian habitat, SCE shall mitigate at a minimum of 2:1 or as identified in the CDFG Streambed Alteration Agreement. The creation or restoration of all habitats shall be monitored for five years after initial planting, or until established success criteria are met, to assess progress and identify potential problems with the restoration site. Remedial activities (e.g., additional planting, weeding, or erosion control) shall be taken during the monitoring period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the five-year maintenance and monitoring period, monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise noted by the CPUC/CDFG. 	Entire Project alignment.	Monitor all areas of habitat creation and restoration for five years or until restored to existing condition; conduct remedial activities (e.g., additional planting, weeding, or erosion control) as necessary.	All areas disturbed by Project construction are returned to existing conditions.	CPUC / CDFG	During and after Project construction for the five-year maintenance and monitoring period or longer, as needed to achieve established performance criteria.

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	B-1b: Provide Documentation of Regulatory Permit Acquisition and MSCHP Compliance. SCE shall provide copies of all approved permits (1602, 404, 401, 402, MSHCP, MSHCP HANS Process for Criteria Cells) prior to ground disturbance in any location requiring the aforementioned permits. SCE shall provide documentation to the CPUC demonstrating compliance with the MSHCP prior to the onset of any ground disturbance.	Entire Project; all areas requiring ground disturbance.	Ensure compliance with all approved permits and the MSHCP.	All required permits shall be attained and the MSHCP shall be fully complied with.	CPUC	Prior to and during Project construction.
B-2: The Project would cause loss of foraging or breeding habitat for wildlife (Class II).	B-1a: Prepare and Implement a Habitat Restoration/Compensation Plan. (See Impact B-1)	Entire Project alignment.	Monitor all areas of habitat creation and restoration for five years or until restored to existing condition; conduct remedial activities (e.g., additional planting, weeding, or erosion control) as necessary.	All areas disturbed by Project construction are returned to existing conditions.	CPUC / CDFG	During and after Project construction for the five-year maintenance and monitoring period or longer, as needed to achieve established performance criteria.
	B-1b: Provide Documentation of Regulatory Permit Acquisition and MSCHP Compliance. (See Impact B-1)	Entire Project; all areas requiring ground disturbance.	Ensure compliance with all approved permits and the MSHCP.	All required permits shall be attained and the MSHCP shall be fully complied with.	CPUC	Prior to and during Project construction.
B-3: The Project would introduce non-native and invasive plant species (Class II).	B-3a: Implement Weed Control Measures. SCE shall ensure that all vehicles and large equipment utilized on the project have been washed prior to commencing work on the proposed project. This includes wheels, undercarriages, bumpers and all parts of the vehicle. SCE shall keep a written log documenting that vehicles have been cleaned prior to use on the project. Once equipment and vehicles have been staged on the job site no further washing would be required unless the vehicles or equipment is exposed to populations of noxious weeds present on the sight.	Entire Project.	Monitor vehicle washing reporting log to ensure consistent washing of vehicles and large equipment.	Noxious weeds are not introduced to construction sites by vehicles or construction equipment.	CPUC	During Project construction, prior to bringing vehicles and equipment on-site.
	B-3b: Landscape with Native or Non-invasive Plant Species. SCE shall ensure that all landscape plants utilized at the El Casco substation are not considered invasive by the CAL-IPC. Plant	All areas where landscaping shall be conducted.	Ensure that introduced plants are considered non-invasive by the	Non-invasive, drought-resistant vegetation is	CPUC	During Project construction (landscaping)

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	species shall be utilized that have a low likelihood of spreading to the adjacent riparian corridor and require minimal watering.		CAL-IPC and do not spread to adjacent riparian corridor after introduction.	established in landscape areas.		phase).
	B-1a: Prepare and Implement a Habitat Restoration/Compensation Plan. (See Impact B-1)	Entire Project alignment.	Monitor all areas of habitat creation and restoration for five years or until restored to existing condition; conduct remedial activities (e.g., additional planting, weeding, or erosion control) as necessary.	All areas disturbed by Project construction are returned to existing conditions.	CPUC / CDFG	During and after Project construction for the five-year maintenance and monitoring period or longer, as needed to achieve established performance criteria.
B-4: The Project would result in a loss of nesting birds (Class II).	B-4: Conduct Pre-Construction Surveys and Monitoring for Breeding Birds. SCE shall conduct protocol level surveys for nesting birds if construction activities are scheduled to occur during the breeding season for raptors and other migratory birds. Surveys shall be conducted in areas within 500 feet of tower sites, laydown/staging areas, substation sites, and access road/spur road locations. If active nests are found, a biological monitor shall establish a 300 foot buffer around the nest and no activities will be allowed within the buffer until the young have fledged from the nest or the nest fails. The biological monitor shall conduct regular monitoring of the nest to determine success/failure and to ensure that project activities are not conducted within the 300 foot buffer until the nesting cycle is complete or the nest fails. The biological monitor shall be responsible for documenting the results of the surveys and the ongoing monitoring. The 300-foot buffer may be adjusted to accommodate environmental conditions (background noise, existing level of disturbance, nest location) with the approval of the CPUC monitor and the CDFG.	Entire Project; within 500 feet of tower sites, laydown/staging areas, substation sites, access roads, and spur roads.	Monitor nests within a 300-foot buffer area of construction areas; determine success / failure of nests; ensure that construction activities do not enter the buffer area.	Nesting birds are not disturbed by Project activities.	CPUC / CDFG	Prior to Project construction.
B-5: The Project would result in permanent disturbance to wildlife at the proposed El Casco Substation site	B-5a: Reduce Noise Levels During Construction. SCE shall ensure that all heavy equipment install and maintain mufflers or other noise-reducing features when working at the substation site. SCE shall monitor and log sound levels at the edge of the riparian corridor and ensure noise levels do not result in a disruption to nesting birds. If construction noise is adversely affecting nesting	El Casco Substation site.	Log sound levels at riparian edge; ensure noise does not disrupt nesting birds; approve use of sound barriers.	Nesting birds subject to protection from MBTA, State and Federally listed species, and	CPUC / USFWS	During Project construction.

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
due to noise and increased human presence (Class II).	birds subject to protection from the MBTA or State and Federally Listed species work shall cease (unless authorized through the context of a Biological Opinion) until adequate sound barriers can be constructed to reduce noise levels at the edge of the riparian corridor. The CPUC and USFWS shall approve any sound barriers utilized at the project site. Construction activities shall be limited to daylight hours, between 0700 and 1700 hrs.			other wildlife are not disturbed by construction noise at the substation site.		
	B-5b: Use Magnetic Coils at Entrance Gate. Instead of motion-activated lighting, SCE and its Contractors shall install magnetic coils, or other technology, in the entrance road to each transition station to activate low-level, directional lighting at the locked entrance gate.	El Casco Substation site.	Ensure use of low-level directional lighting.	Wildlife is not disturbed by lighting at the substation site.	CPUC	During Project construction.
	B-5c: Use Shielded Lighting and Schedule Daylight Maintenance. SCE shall use low-level shielded lighting at the El Casco substation site in order to illuminate equipment areas within the substation. Shielded lighting shall be installed to limit spill-over glare and nighttime sky-lighting. The brightness of station lighting shall be kept at levels consistent with health and safety requirements. SCE shall ensure that routine maintenance and repair activities only conducted during daylight hours.	El Casco Substation site.	Ensure use of low-level shielded lighting maintained to health and safety requirements.	Wildlife is not disturbed by spill-over glare or nighttime sky-lighting at the substation site.	CPUC	During Project construction and maintenance.
B-6: Construction activities would result in indirect or direct loss of listed plants (Class II).	B-6: Conduct Surveys for Sensitive Plant Species and Flag for Avoidance. SCE shall conduct focused surveys prior to construction during the appropriate floristic period appropriate for each of the sensitive plant species identified in Table D.3-3 with the potential to occur within the Project ROW and within 100 feet of all surface disturbing activities. Populations of sensitive plants shall be flagged and mapped prior to construction. If sensitive plants are located during the focused surveys, then modification of the placement of towers, access roads, laydown areas, and other ground disturbing activities would be implemented in order to avoid the plants. If listed plant species or species requiring 90% avoidance by the MSHCP cannot be avoided, SCE shall avoid the plants until authorized through the context of a biological opinion and authorized through the MSHCP Determination of Biologically Equivalent or Superior Preservation process.	Entire Project; within 100 feet of all surface disturbance.	Modify location of ground disturbance to avoid listed and sensitive plant species as needed; where unavoidable, authorize disturbance of plant species.	Listed and sensitive plant species are not disturbed by Project construction.	CPUC	Prior to Project construction; during floristic periods (Table D.3-3).

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
B-7: Construction activities would result in indirect or direct loss of Quino Checkerspot habitat (Class II).	B-1a: Prepare and Implement a Habitat Restoration/Compensation Plan. (See Impact B-1)	Entire Project alignment.	Monitor all areas of habitat creation and restoration for five years or until restored to existing condition; conduct remedial activities (e.g., additional planting, weeding, or erosion control) as necessary.	All areas disturbed by Project construction are returned to existing conditions.	CPUC / CDFG	During and after Project construction for the five-year maintenance and monitoring period or longer, as needed to achieve established performance criteria.
	B-1b: Provide Documentation of Regulatory Permit Acquisition and MSCHP Compliance. (See Impact B-1)	Entire Project; all areas requiring ground disturbance.	Ensure compliance with all approved permits and the MSHCP.	All required permits shall be attained and the MSHCP shall be fully complied with.	CPUC	Prior to and during Project construction.
	B-3a: Implement Weed Control Measures. (See Impact B-3)	Entire Project.	Monitor vehicle washing reporting log to ensure consistent washing of vehicles and large equipment.	Noxious weeds are not introduced to construction sites by vehicles or construction equipment.	CPUC	During Project construction, prior to bringing vehicles and equipment on-site.
B-8: The Project would result in habitat loss or disturbance to listed birds, including migratory birds and raptors (Class II).	B-1a: Prepare and Implement a Habitat Restoration/Compensation Plan. (See Impact B-1)	Entire Project alignment.	Monitor all areas of habitat creation and restoration for five years or until restored to existing condition; conduct remedial activities (e.g., additional planting, weeding, or erosion control) as necessary.	All areas disturbed by Project construction are returned to existing conditions.	CPUC / CDFG	During and after Project construction for the five-year maintenance and monitoring period or longer, as needed to achieve established performance criteria.

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	B-1b: Provide Documentation of Regulatory Permit Acquisition and MSCHP Compliance. (See Impact B-1)	Entire Project; all areas requiring ground disturbance.	Ensure compliance with all approved permits and the MSHCP.	All required permits shall be attained and the MSHCP shall be fully complied with.	CPUC	Prior to and during Project construction.
	B-3a: Implement Weed Control Measures. (See Impact B-3)	Entire Project.	Monitor vehicle washing reporting log to ensure consistent washing of vehicles and large equipment.	Noxious weeds are not introduced to construction sites by vehicles or construction equipment.	CPUC	During Project construction, prior to bringing vehicles and equipment on-site.
B-9: The Project would result in the electrocution of listed bird species (Class II).	B-9: Construct to 2006 APLIC Guidelines. SCE shall conform to the latest practices (as outlined in the 2006 APLIC document) to protect birds from electrocution. Implementation of these guidelines shall be verified by the CPUC.	Entire Project.	Ensure compliance with APLIC 2006 practices for protecting birds from electrocution.	Birds are not electrocuted as a result of the Project.	CPUC	During Project construction.
B-10: The Project would result in transmission line collisions by listed bird species (Class II).	B-10: Use Collision-Reducing Techniques. SCE shall install the transmission line utilizing APLIC standards for collision-reducing techniques as outlined in "Mitigating Bird Collisions with Power Lines: The State of the Art in 2006 (APLIC, 2006)."	Entire Project.	Ensure use of collision-reducing techniques during power line installation.	Birds are not electrocuted through collisions with power lines.	CPUC	During Project construction.
B-11: The Project would result in the loss of special-status plant species (Class II).	B-1a: Prepare and Implement a Habitat Restoration/Compensation Plan. (See Impact B-1)	Entire Project alignment.	Monitor all areas of habitat creation and restoration for five years or until restored to existing condition; conduct remedial activities (e.g., additional planting, weeding, or erosion control) as necessary.	All areas disturbed by Project construction are returned to existing conditions.	CPUC / CDFG	During and after Project construction for the five-year maintenance and monitoring period or longer, as needed to achieve established performance criteria.
	B-1b: Provide Documentation of Regulatory Permit Acquisition and MSCHP Compliance. (See Impact B-1)	Entire Project; all areas requiring ground disturbance.	Ensure compliance with all approved permits and the MSHCP.	All required permits shall be attained and the MSHCP shall be fully complied	CPUC	Prior to and during Project construction.

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
				with.		
	B-3a: Implement Weed Control Measures. (See Impact B-3)	Entire Project.	Monitor vehicle washing reporting log to ensure consistent washing of vehicles and large equipment.	Noxious weeds are not introduced to construction sites by vehicles or construction equipment.	CPUC	During Project construction, prior to bringing vehicles and equipment on-site.
	B-6: Conduct Surveys for Sensitive Plant Species and Flag for Avoidance. (See Impact B-6)	Entire Project; within 100 feet of all surface disturbance.	Modify location of ground disturbance to avoid listed and sensitive plant species as needed; where unavoidable, authorize disturbance of plant species.	Listed and sensitive plant species are not disturbed by Project construction.	CPUC	Prior to Project construction; during floristic periods (Table D.3-3).
B-12: Construction activities would result in indirect or direct loss of individuals, or a direct loss of habitat for sensitive wildlife (Class II).	B-1b: Provide Documentation of Regulatory Permit Acquisition and MSCHP Compliance. (See Impact B-1)	Entire Project; all areas requiring ground disturbance.	Ensure compliance with all approved permits and the MSHCP.	All required permits shall be attained and the MSHCP shall be fully complied with.	CPUC	Prior to and during Project construction.
B-13: The Project would result in the loss of special-status reptile species (Class II).	B-13a: Conduct Pre-Construction Surveys and Relocate Sensitive Reptiles. SCE shall retain a qualified biologist to conduct pre-construction surveys for sensitive reptiles. The qualified biologist must have an appropriate scientific collecting permit to handle sensitive species likely to occur in the project area. SCE will provide resumes or other relevant information to the CPUC documenting the qualifications of the proposed biologist. The authorized biologist will be present during all ground disturbance and construction activities immediately adjacent to or within aquatic or terrestrial habitats that support populations of sensitive reptiles. If sensitive species are detected in the work area during the surveys, the authorized biologist will capture and relocate individuals to suitable undisturbed habitat out of harm's way. All wildlife moved during project activities will be documented and retained by SCE. Any sensitive reptiles killed during construction activities shall be salvaged and deposited in the Santa Barbara Museum of Natural History, Vertebrate Zoology Division collections (contact: Paul Collins, Curator, (805) 682-4711, x-154).	Entire Project.	Authorize biologist to monitor construction activities, collect and relocate sensitive species during construction, and document all wildlife moved during Project activities.	Special-status reptile species are not disturbed through Project construction.	CPUC	During Project construction.
	B-13b: Monitor and Relocate Species During Grading of	El Casco	Capture and relocate	Legless lizards	CPUC	During Project

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Substation. In order to salvage legless lizards and two-striped garter snakes from the substation site, SCE shall coordinate all initial grubbing and vegetation removal activities with the biological monitor such that biologists can watch these activities and capture and relocate any sensitive reptiles disturbed by this work. This is typically accomplished by slowly removing the vegetation at the ground surface in one pass, then in 4-inch lifts in successive passes until grading are at least 12 inches deep. The biologist shall have the authority to halt grading activities to relocate sensitive reptiles from the project area.	Substation site.	reptiles disturbed during grubbing and vegetation removal; halt grading activities as necessary.	and two-striped garter snakes are not disturbed by grading or construction activities at the substation site.		construction (grubbing and vegetation removal activities).
	B-1a: Prepare and Implement a Habitat Restoration/Compensation Plan. (See Impact B-1)	Entire Project alignment.	Monitor all areas of habitat creation and restoration for five years or until restored to existing condition; conduct remedial activities (e.g., additional planting, weeding, or erosion control) as necessary.	All areas disturbed by Project construction are returned to existing conditions.	CPUC / CDFG	During and after Project construction for the five-year maintenance and monitoring period or longer, as needed to achieve established performance criteria.
	B-3a: Implement Weed Control Measures. (See Impact B-3)	Entire Project.	Monitor vehicle washing reporting log to ensure consistent washing of vehicles and large equipment.	Noxious weeds are not introduced to construction sites by vehicles or construction equipment.	CPUC	During Project construction, prior to bringing vehicles and equipment on-site.
B-14: The Project would result in the loss of burrowing owls (Class II).	B-1b: Provide Documentation of Regulatory Permit Acquisition and MSCHP Compliance. (See Impact B-1)	Entire Project; all areas requiring ground disturbance.	Ensure compliance with all approved permits and the MSHCP.	All required permits shall be attained and the MSHCP shall be fully complied with.	CPUC	Prior to and during Project construction.

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
B-15: The Project would result in the loss of foraging habitat or disruption of nesting for special-status raptor species (Class II).	B-4: Conduct pre-construction surveys and monitoring for breeding birds. (See Impact B-4)	Entire Project; within 500 feet of tower sites, laydown/staging areas, substation sites, access roads, and spur roads.	Monitor nests within a 300-foot buffer area of construction areas; determine success / failure of nests; ensure that construction activities do not enter the buffer area.	Nesting birds are not disturbed by Project activities.	CPUC / CDFG	Prior to Project construction.
B-16: The Project would result in electrocution of special-status bird species (Class II).	B-9: Construct to 2006 APLIC Guidelines. (See Impact B-9)	Entire Project.	Ensure compliance with APLIC 2006 practices for protecting birds from electrocution.	Birds are not electrocuted as a result of the Project.	CPUC	During Project construction.
B-17: The Project would result in transmission line collision by special-status bird species (Class II).	B-10: Use Collision-Reducing Techniques. (See Impact B-10)	Entire Project.	Ensure use of collision-reducing techniques during power line installation.	Birds are not electrocuted through collisions with power lines.	CPUC	During Project construction.
B-18: The Project would result in the loss of the American badger (Class II).	B-18: Avoid Active Burrows or Nests and Relocate During the Non-breeding Season. SCE shall retain a qualified biologist to survey and identify any badger dens and wood rat middens located in the project ROW. Occupied dens/middens shall be flagged for avoidance during construction and a biological monitor shall ensure that construction activities do not disrupt the den. Work can occur within 30 feet of the den/midden outside the breeding season (February–May). If avoidance is not possible SCE shall utilize box traps or other CDFG approved relocation techniques to relocate the animal. If this is not possible the den/midden shall be slowly excavated (either by hand or mechanized equipment under the direct supervision of the biologist removing no more than 4" at a time) before or after the breeding season (February-May) in an effort to relocate the animal. Any relocation of badgers shall occur only after consultation with the CDFG and CPUC monitor. Wood rat middens shall be relocated to suitable habitat as close as possible to the previous location.	Entire Project.	Identify occupied dens / middens; relocate animals and excavate dens / middens as necessary.	American badgers and wood rat middens are not disturbed by Project activities.	CPUC / CDFG	Prior to and during Project construction.
B-19: The Project would result in loss of special-status rodent species (Class II).	B-19: Avoid Burrow Areas. SCE shall retain a qualified biologist to survey small mammal burrow densities for Los Angeles Pocket mouse in proposed work areas. Small mammal burrow densities shall be mapped as "low", "medium", and "high-density" on aerial maps of the project alignment, and areas with a "high density" of	Entire Project.	Ensure that construction does not occur in high burrow density areas; monitor relocation of target species where	Los Angeles Pocket mouse burrows and habitat are not disturbed during	CPUC	Prior to and during Project construction.

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	burrows shall be flagged for avoidance during construction. The biologist shall monitor construction in these areas and work with equipment operators to avoid areas of high burrow densities during access to the site. If high burrow density areas cannot be avoided, then a qualified small mammal biologist shall live-trap target species out of these specific areas and close burrows for the duration of construction activities in that immediate area. If the 90% avoidance threshold is met for the pocket mouse or the Determination of Biologically Equivalent or Superior Preservation is provided this mitigation would defer to the MSHCP requirements.		high-density burrows are unavoidable.	Project construction.		
B-20: The Project would result in loss of jurisdictional waters and wetlands (Class II).	B-1a: Prepare and Implement a Habitat Restoration/Compensation Plan. (See Impact B-1)	Entire Project alignment.	Monitor all areas of habitat creation and restoration for five years or until restored to existing condition; conduct remedial activities (e.g., additional planting, weeding, or erosion control) as necessary.	All areas disturbed by Project construction are returned to existing conditions.	CPUC / CDFG	During and after Project construction for the five-year maintenance and monitoring period or longer, as needed to achieve established performance criteria.
	B-1b: Provide Documentation of Regulatory Permit Acquisition and MSCHP Compliance. (See Impact B-1)	Entire Project; all areas requiring ground disturbance.	Ensure compliance with all approved permits and the MSHCP.	All required permits shall be attained and the MSHCP shall be fully complied with.	CPUC	Prior to and during Project construction.

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
B-21: The Project would result in the loss or restriction of habitat connectivity in Constrained Linkage 22 (Class II).	B-1a: Prepare and Implement a Habitat Restoration/Compensation Plan. (See Impact B-1)	Entire Project alignment.	Monitor all areas of habitat creation and restoration for five years or until restored to existing condition; conduct remedial activities (e.g., additional planting, weeding, or erosion control) as necessary.	All areas disturbed by Project construction are returned to existing conditions.	CPUC / CDFG	During and after Project construction for the five-year maintenance and monitoring period or longer, as needed to achieve established performance criteria.
	B-1b: Provide Documentation of Regulatory Permit Acquisition and MSCHP Compliance. (See Impact B-1)	Entire Project; all areas requiring ground disturbance.	Ensure compliance with all approved permits and the MSHCP.	All required permits shall be attained and the MSHCP shall be fully complied with.	CPUC	Prior to and during Project construction.
	B-5a: Reduce Noise Levels During Construction. (See Impact B-5)	El Casco Substation site.	Log sound levels at riparian edge; ensure noise does not disrupt nesting birds; approve use of sound barriers.	Nesting birds subject to protection from MBTA, State and Federally listed species, and other wildlife are not disturbed by construction noise at the substation site.	CPUC / USFWS	During Project construction.
	B-5b: Use Magnetic Coils at Entrance Gate. (See Impact B-5)	El Casco Substation site.	Ensure use of low-level directional lighting.	Wildlife is not disturbed by lighting at the substation site.	CPUC	During Project construction.
	B-5c: Use Shielded Lighting and Schedule Daylight Maintenance. (See Impact B-5)	El Casco Substation site.	Ensure use of low-level shielded lighting maintained to health and safety requirements.	Wildlife is not disturbed by spill-over glare or nighttime sky-lighting at the substation site.	CPUC	During Project construction and maintenance.

Table D.4-7. Mitigation Monitoring Program – Biological Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
B-22: The Project would conflict with the MSHCP (Class II).	B-1a: Prepare and Implement a Habitat Restoration/Compensation Plan. (See Impact B-1)	Entire Project alignment.	Monitor all areas of habitat creation and restoration for five years or until restored to existing condition; conduct remedial activities (e.g., additional planting, weeding, or erosion control) as necessary.	All areas disturbed by Project construction are returned to existing conditions.	CPUC / CDFG	During and after Project construction for the five-year maintenance and monitoring period or longer, as needed to achieve established performance criteria.
	B-1b: Provide Documentation of Regulatory Permit Acquisition and MSCHP Compliance. (See Impact B-1)	Entire Project; all areas requiring ground disturbance.	Ensure compliance with all approved permits and the MSHCP.	All required permits shall be attained and the MSHCP shall be fully complied with.	CPUC	Prior to and during Project construction.
	B-5a: Reduce Noise Levels During Construction. (See Impact B-5)	El Casco Substation site.	Log sound levels at riparian edge; ensure noise does not disrupt nesting birds; approve use of sound barriers.	Nesting birds subject to protection from MBTA, State and Federally listed species, and other wildlife are not disturbed by construction noise at the substation site.	CPUC / USFWS	During Project construction.
	B-5b: Use Magnetic Coils at Entrance Gate. (See Impact B-5)	El Casco Substation site.	Ensure use of low-level directional lighting.	Wildlife is not disturbed by lighting at the substation site.	CPUC	During Project construction.
	B-5c: Use Shielded Lighting and Schedule Daylight Maintenance. (See Impact B-5)	El Casco Substation site.	Ensure use of low-level shielded lighting maintained to health and safety requirements.	Wildlife is not disturbed by spill-over glare or nighttime sky-lighting at the substation site.	CPUC	During Project construction and maintenance.