

D.5 Biological Resources – Wildlife

This section describes the Wildlife resources in the affected area, identifies and analyzes potential environmental impacts of the Proposed Project and alternatives, and recommends measures to reduce or avoid adverse impacts of project construction and operation. The affected environment for wildlife is described in Section D.5.1; the applicable regulations and standards are summarized in Section D.5.2. Sections D.5.3 through D.5.5 describe the impacts and mitigation for the Proposed Project and the alternatives. Section D.5.6 presents the mitigation measures and mitigation monitoring requirements.

This section represents the most current available information. Much of the information has been derived from the *Biological Resources Technical Report: West of Devers Upgrade Project*, prepared by LSA (2013b). Content in the *Biological Resources Technical Report* is based on all available data including reports, books, manuals, and extensive new field data specific to the project. In addition, this section incorporates the focused survey reports and other supporting documentation provided with Appendix F of the Proponent's Environmental Assessment (PEA; SCE, 2013) and the findings of Aspen biologists during independent site reviews and consultations with resource agency staff and other experts.

D.5.1 Environmental Setting / Affected Environment

This section summarizes wildlife habitats and special-status species of the region in Section D.5.1.1 and describes specific baseline conditions for each segment of the proposed right-of-way (ROW; see Figure B-1) in Section D.5.1.2.

D.5.1.1 Regional Setting and Approach to Data Collection

Data Collection Methodology

Throughout this section, the “Proposed Project Area” refers to all areas that may be directly affected by the Proposed Project, including the ROW and all off-site work areas, access routes, and telecommunications routes, as described in Section D.4.1.1. The Proposed Project study area is based on the field surveys, including buffer areas surrounding the ROW, reported in the *Biological Resources Technical Report* (LSA, 2013b) as described in Section D.4.1.1. Larger survey buffer areas were used for raptors, and a minimum 4-nautical-mile (4.6-mile) buffer was used for golden eagle surveys. Figures B-1 through B-6 (Section B, Project Description) illustrate the project corridor and components.

Regional Setting

The West of Devers ROW traverses several geographical and ecological zones (see Section D.4.1.1). It traverses the San Timoteo Badlands (Badlands) in western Riverside County, the San Gorgonio Pass, and extends into the western Sonoran Desert. Collectively, these areas contain a diverse fauna that includes many rare, threatened, and endangered animals. In addition to the general ecological description (Section D.4.1.1), biological connectivity across the San Gorgonio Pass is important to wildlife populations in the San Bernardino and San Jacinto Mountains; and sand transported from the mountain canyons supplies desert dune wildlife habitat in the Coachella Valley. The ROW also traverses tribal lands and two Multiple Species Habitat Conservation Plan (MSHCP) areas, described in Section D.4.1.1 and mapped in Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7).

Habitat

Wildlife habitat, including regional climate, physical structure, and biological productivity and food resources for many wildlife species, is largely reflected by vegetation. However, “habitat” is a broader concept, including other ecological factors, such as availability or proximity to water; suitable nesting or denning sites; shade; foraging perches; cover sites to escape from predators; soils that are suitable for burrowing or hiding; limited noise and disturbance; and many other factors that may be unique to each species. Thus, vegetation described in Section D.4.1.1 (Section D.4) is a useful overarching descriptor for habitat and it is the primary factor in this analysis of impacts to wildlife habitat. Where additional details of habitat suitability are necessary to this analysis, they are provided in the discussion of special-status wildlife species.

Aeolian (windblown) sand habitat is not defined by vegetation, but rather by substrate. This habitat is comprised of sand dunes and fields, including active, partially stabilized, and stabilized desert dunes, sand fields, and sand hummocks (CVAG, 2007). Several special-status wildlife species are found primarily in aeolian sands.

Table D.4-1 (in Section D.4) provides the acreages of each vegetation community and habitat type found in the project study area. The acreage of potential project-related impacts in each habitat type is discussed in Section D.4.3 of Section D.4. Maps showing locations of vegetation communities and habitat types are provided in Figures Ap.7-2a through Ap.7-2k, Land Cover, and Figure Ap.7-4, Aeolian Sand Habitat (Appendix 7). The paragraphs below list a few characteristic wildlife species for each of the vegetation communities on the ROW.

Grassland/forbland. Wildlife commonly observed in the grassland/forbland habitat includes red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), western meadowlark (*Sturnella neglecta*), lark sparrow (*Chondestes grammacus*), California ground squirrel (*Spermophilus beecheyi*), Audubon’s cottontail (*Sylvilagus audubonii*), deer mouse (*Peromyscus maniculatus*), and coyote (*Canis latrans*).

Chaparral. Wildlife frequently observed in chaparral included western toad (*Anaxyrus boreas*), California quail (*Callipepla californica*), Anna’s hummingbird (*Calypte anna*), western scrub-jay (*Aphelocoma californica*), wrentit (*Chamaea fasciata*), spotted towhee (*Pipilo maculatus*), big-eared woodrat (*Neotoma macrotis*), striped skunk (*Mephitis mephitis*), and mule deer (*Odocoileus hemionus*).

Coastal sage scrub. Wildlife that were frequently observed in coastal sage scrub included western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*), Anna’s hummingbird, western scrub-jay (*Aphelocoma californica*), California towhee (*Melospiza crissalis*), white-crowned sparrow (*Zonotrichia leucophrys*), big-eared woodrat, Audubon’s cottontail, coyote, and mule deer. Coastal sage scrub is generally of conservation concern because it is the habitat of the federally listed threatened California gnatcatcher.

Desert scrub. Wildlife frequently observed in desert scrub included common side-blotched lizard, common raven (*Corvus corax*), cactus wren (*Campylorhynchus brunneicapillus*), long-tailed pocket mouse (*Chaetodipus formosus*), and desert woodrat (*Neotoma lepida*).

Coast live oak woodland. Oak forests and woodlands provide food, cover, and nesting or denning habitat for many animal species. Standing dead trees and fallen logs provide essential habitat elements. Acorns, fruits, leaves, insects, seeds, mushrooms, and other fungi all provide food for wildlife. Oak woodlands and forests provide thermal cover for large mammals including deer, and escape cover for many other animals. Oak canopies and foliage provide perching, roosting, and nesting sites for many bird species. Cavities in the limbs or trunks of oak trees are used as nesting and denning sites by birds and mammals. Dead oak

trees provide nest sites for woodpeckers, which build nesting cavities, and “secondary cavity nesters,” which use old woodpecker nests. Wildlife species frequently observed or heard in woodland areas included Cooper’s hawk (*Accipiter cooperii*), acorn woodpecker (*Melanerpes formicivorus*), oak titmouse (*Baeolophus inornatus*), black phoebe (*Sayornis nigricans*), common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), and big-eared woodrat.

Riparian woodland. Riparian woodlands, like oak woodlands, provide many wildlife habitat components not available in grasslands or shrublands, and therefore support higher abundance and diversity of wildlife. Frequently detected species included Cooper’s hawk, black phoebe, common yellowthroat, song sparrow, and big-eared woodrat.

Alluvial scrub. Common wildlife species found in the alluvial scrub vegetation community included many of the same species found in the desert scrub and coastal sage scrub communities.

Agricultural land. Agricultural land provides suitable habitat for many native wildlife species, including some special-status animals. Wildlife frequently detected on agricultural land included red-tailed hawk, American kestrel, house finch (*Haemorhous mexicanus*), California ground squirrel, deer mouse, and coyote.

Developed/disturbed land. This land cover has limited habitat value, but some areas provide habitat for urban-adapted species, such as Cooper’s hawk, black phoebe, house finch, and Audubon’s cottontail.

Open water. Open water bodies are found at four locations within the project study area and vicinity. In Segment 3:

- A detention basin just north of the San Timoteo Landfill and south of San Timoteo Canyon Road along Refuse Road. The basin is surrounded by riparian woodland vegetation and may occasionally lack surface water.
- The El Casco Lakes (approximately 12 acres) are located on the south side of San Timoteo Canyon Road. The lakes are maintained by the Riverside Land Conservancy, and are used for recreational fishing. The lakes are planned to be either emptied or allowed to return to a natural state due to the prohibitively high cost of continued maintenance.
- Three lakes (approximately 24 acres total) at Fisherman’s Retreat, a commercial campground and stocked fishing area, approximately 0.6 miles east of El Casco Lakes along San Timoteo Canyon Road.
- In Segment 5, water from the Robertson’s Plant 66 (gravel mine) is discharged into an inactive portion of the mine. The water level is variable, and the basin may occasionally lack surface water, but emergent riparian vegetation is present around the margins. The surface water area can vary from approximately 1 to 6 acres.

Aeolian sand. Aeolian (windblown) sand habitat may support certain special-status species, such as Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilensis*), which may be present on the Proposed Project route.

Special-status Wildlife Species

Table Ap.7-2 (in Appendix 7) lists special-status wildlife species occurring or potentially occurring in the Proposed Project area, with conservation status and habitat descriptions for each species. Figures Ap.7-3a through Ap.7-3k, Special-status Species Observations (Appendix 7), depict the locations of federal- and state-listed and state designated species of special concern that were observed during surveys conducted between 2011 and 2013. For species not observed during surveys, the potential for their occurrence was determined by biologists knowledgeable about each species based on the species’ habitat requirements,

range (including elevation), and previously recorded observations within the region. Potential for occurrence is ranked as present, high, moderate, low, and not likely to occur. The criteria used to make these determinations are listed in Appendix 7. Detailed accounts for these species are provided in the *Biological Resources Technical Report* (LSA, 2013b).

Ninety-six special-status wildlife species occur or may occur in the Proposed Project study area, including 12 species listed under the federal Endangered Species Act (ESA), California ESA, or both. The listed species are Casey's June beetle (*Dinacoma caseyi*; federal endangered), Sierra Madre (mountain) yellow-legged frog (*Rana muscosa*; federal and state endangered), desert tortoise (*Gopherus agassizii*; federal and state threatened), Coachella Valley fringe-toed lizard (*Uma inornata*; federal threatened and state endangered), Swainson's hawk (*Buteo swainsoni*; state threatened), bald eagle (*Haliaeetus leucocephalus*; federal and state protected and state endangered), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*; federal threatened and state endangered), southwestern willow flycatcher (*Empidonax traillii extimus*; federal and state endangered), little willow flycatcher (*E.t. brewsteri*; state endangered), least Bell's vireo (*Vireo bellii pusillus*; federal and state endangered), coastal California gnatcatcher (*Polioptila californica californica*; federal threatened), and Stephens' kangaroo rat (*Dipodomys stephensi*; federal endangered and state threatened). Other special-status species of note are golden eagle (*Aquila chrysaetos*; federal and state protected), white-tailed kite (*Elanus leucurus*; state protected), burrowing owl (*Athene cunicularia*; CDFW Species of Special Concern), American peregrine falcon (*Falco peregrinus*; state protected), desert kit fox (*Vulpes macrotis arsipus*; state protected), and Nelson's bighorn sheep, non-peninsular population (*Ovis canadensis nelsoni*; state protected).

MSHCP Covered Wildlife Species. In addition to the special-status species listed in Table Ap.7-2 (in Appendix 7), the WR-MSHCP covers other selected species lacking state or federal conservation designations. These species are covered by the WR-MSHCP because of special regional considerations, because they are associated with limited habitats within the WR-MSHCP area, or because they are key species in maintaining species richness in smaller habitat fragments. These species are listed in Table Ap.7-2 (in Appendix 7). Some of these species have specific regulations as set forth by the WR-MSHCP.

All the species covered by the CV-MSHCP that occur or may occur within the Proposed Project study area are recognized as special-status species by federal or state agencies, and are listed in Table Ap.7-2 (in Appendix 7).

Critical Habitat. The Proposed Project route passes through federally designated critical habitat¹ for coastal California gnatcatcher (*Polioptila californica californica*) in Segment 2 just east of the Vista Substation where the corridor passes through the cities of Grand Terrace and Loma Linda on either side of Reche Canyon Road. Coastal California gnatcatcher critical habitat occupies 623.2 acres in the Proposed Project study area and extends along the ROW for approximately 3.5 miles, mainly in grassland/forbland and coastal sage scrub habitats.

Critical habitat for two other listed wildlife species is found near the route, but not within the Proposed Project area. See Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7) for the locations of designated critical habitat. Critical habitat for San Bernardino kangaroo rat (*Dipodomys merriami parvus*) and Santa Ana sucker (*Catostomus santaanae*) are located in the Santa Ana River to the west and north and outside of the Proposed Project area in Segment 2. Critical habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) is found within 200 feet of a proposed fiber-optic route, along San Timoteo Creek in Segment 3.

¹ Geographic areas designated by the United States Fish and Wildlife Service [USFWS] in Recovery Plans that contain features essential to conservation and recovery of threatened or endangered species.

Wildlife Movement

The extent, distribution, and accessibility of habitat affect the long-term viability of regional wildlife populations. Habitat fragmentation and isolation leads to the loss of vulnerable species within those areas. Accessibility among habitat areas, i.e., “connectivity,” is important to long-term genetic diversity and demography of wildlife populations. In the short term, connectivity may also be important to individual animals’ ability to occupy their home ranges, if their ranges extend across a potential movement barrier. These considerations apply to greater or lesser extent to all plants and animals. Plant populations “move” over the course of generations via pollen and seed dispersal; most birds and insects travel and disperse via flight; terrestrial vertebrates disperse across land. Therefore, landscape barriers and impediments are more important considerations for movement of terrestrial species. These considerations are especially important for rare species and also for large mammals, which tend to be wide-ranging and exist in lower population densities.

The nature of connectivity differs for corridor “passage” and corridor “dweller” species (Beier and Loe, 1992). Corridor passage species would traverse connectivity areas during ordinary diurnal or seasonal movement patterns, whereas corridor dweller species must persist as viable populations over multiple generations within a connectivity area to eventually migrate from one habitat block to another.

In landscapes where native habitats are isolated patches surrounded by other land uses, planning for wildlife movement generally focuses on “wildlife corridors” to provide animals with access routes among habitat patches. Linkages in these areas are often designated along riparian corridors, because of their linear nature and other important habitat values. However, uplands may be preferred as biological connectivity habitat for some species.

In largely undeveloped areas, wildlife habitat is available in extensive open space areas, but specific barriers may impede or prevent wildlife movement. In these landscapes, wildlife movement planning focuses on specific sites where animals can cross linear barriers (e.g., wash crossings beneath Interstate 10), and on broader linkage areas that may support stable, long-term populations of corridor “dweller” species.

Movement and dispersal corridors that connect large blocks of habitat are essential to the long-term viability of plant and wildlife populations. The California Essential Habitat Connectivity Project (Connectivity Project) was commissioned by the California Department of Transportation (Caltrans) and the California Department of Fish and Wildlife (CDFW; formerly the California Department of Fish and Game) to create a statewide assessment of essential habitat connectivity to be used for conservation and infrastructure planning (Caltrans and CDFG, 2010).

One goal of the Connectivity Project was to create the Essential Connectivity Map, which depicts large, relatively natural habitat blocks that support native biodiversity (natural landscape blocks) and areas essential for ecological connectivity between them (essential connectivity areas). This map does not reflect the needs of particular species, but is based on overall biological connectivity and ecological integrity (Caltrans and CDFG, 2010).

The Connectivity Project looked at the state as a whole, using available statewide data layers, and addressing Natural Landscape Blocks of 2,000 acres or larger. Therefore, a more detailed analysis should be undertaken to assess local and regional needs for connectivity and develop linkage designs based on the requirements of individual species (Caltrans and CDFG, 2010).

Conservation and management of land within essential connectivity areas should be prioritized to maintain and enhance ecological connectivity. Depending on the situation, management may involve sustaining wildlife movement across relatively undisturbed lands, restoration of disturbed lands to improve ecological connectivity, or removal of barriers to wildlife movement (Caltrans and CDFG, 2010).

For terrestrial wildlife, the western part of the Proposed Project route is within developed areas, or within the Badlands area, south of Loma Linda, Redlands, and Calimesa. The Badlands are generally contiguous open space (with some partial barriers for road crossings) reaching to the San Jacinto Mountains to the southeast. The Badlands form a southeast-northwest trending “peninsula” of open space, surrounded on the north by San Bernardino, Loma Linda, Redlands, Yucaipa, and Beaumont; on the west by Grand Terrace and Riverside; and on the south by Moreno Valley and San Jacinto. The Essential Connectivity Map identifies the Badlands as a natural landscape block and essential connectivity area from the San Jacinto Mountains to the CDFW San Jacinto Wildlife Area and Lake Perris State Recreation Area and to Box Springs Mountain Park and reserve (Caltrans and CDFG, 2010). The Badlands may also have some limited connection to San Bernardino Mountains to the northeast, although Interstate 10 and urban development in that area are significant barriers.

San Gorgonio Pass is the best available movement route between the San Jacinto and San Bernardino Mountains, and is identified as an essential connectivity area (Caltrans and CDFW, 2010). North-south movement across the pass is obstructed by land uses and linear transportation corridors, but the crossing continues to provide for limited biological linkage. In addition, San Gorgonio Pass is an important corridor between coastal lowlands and Colorado Desert lowlands for migrating birds. This is true for many species of landbirds that normally travel at night, as well many species of waterbirds that travel by day or night. Seasonally, springtime is the most critical time for migrating birds in the Proposed Project study area, as the Coachella Valley and surrounding ranges serve to funnel northbound animals to the northwest and west through the pass. East of Banning, the Proposed Project route crosses generally open areas, where extensive wildlife movement habitat is interrupted by linear transportation corridors.

D.5.1.2 Environmental Setting by Segment

The following sections briefly describe wildlife resources along the Proposed Project route by segment (see Figure B-1, Project Location Map). Location-specific discussions of plant communities and habitat may be found in Section D.4.1.2. Location-specific special-status wildlife data are provided here. Table Ap.7-2 (in Appendix 7) lists special-status wildlife species occurring or potentially occurring in the Proposed Project area, with conservation status and habitat descriptions for each species. Figures Ap.7-3a through Ap.7-3k, Special-status Species Observations (Appendix 7), show where federal- and state-listed and state designated species of special concern were observed during surveys conducted between 2011 and 2013. For species not observed during surveys, the potential for their occurrence was determined by biologists knowledgeable about each species, based on the species’ habitat requirements and geographic range (LSA, 2013b).

Substations. Existing substations proposed for equipment modifications are listed in Section D.4.1.2 and mapped on Figures B-1 through B-6 (Section B). The substation sites are already heavily developed. Except for anthropogenic structures where birds may nest, the substations do not support likely habitat for special-status wildlife. Substation modification activities would be limited to the areas surrounding the substations. No permanent or temporary impacts to habitat are anticipated, and Proposed Project-related work at the substations is not anticipated to increase substantially above existing conditions (typically fewer than 100 days of work at each substation).

Staging Yards. SCE anticipates using one or more of the possible temporary staging yards listed in Table B-5, and shown on Figures B-1 through B-6 (all in Section B, Description of the Proposed Project).

At the following 5 potential staging yard locations, vegetation and habitat consist of disturbed land (e.g., forbland/grassland, disturbed/developed) and no suitable habitat for special-status wildlife is present:

- Mountain View 1 Staging Yard (Segment 1; San Bernardino County)
- Lugonia Staging Yard (Segment 1; San Bernardino County)
- Grand Terrace Staging Yard (Segment 2; San Bernardino County)
- Beaumont 1 Staging Yard (Segment 4; Riverside County, WR-MSHCP)
- Beaumont 2 Staging Yard (Segment 4; Riverside County, WR-MSHCP)

The remaining six potential staging yard locations support native vegetation or habitat, and may support special-status wildlife species, as follows:

Poultry Staging Yard (Segment 3; Riverside County, WR-MSHCP). Use of the area may result in impacts up to approximately 20.7 acres, of which 2.9 acres are coastal sage scrub and the remainder of the land is agricultural. This area may provide foraging habitat for special-status wildlife, including golden eagle, white-tailed kite, and burrowing owl, and provide potential habitat for coastal California gnatcatcher and Stephens' kangaroo rat. However, this roadside yard is not expected to provide a high-quality use area.

San Timoteo Staging Yard (Segment 3; Riverside County, WR-MSHCP). Impacts to land cover due to construction and use of the staging yard would occur to up to 15.5 acres of agricultural land, 0.6 acres of developed/disturbed areas, and 0.6 acres of coastal sage scrub. These habitats provide potential foraging habitat for golden eagle, white-tailed kite, and burrowing owl, and 0.6 acres of potential habitat for Stephens' kangaroo rat and coastal California gnatcatcher.

Hathaway 1 Staging Yard (Segment 5; Riverside County, WR-MSHCP). Impacts to forbland/grassland (up to 6.9 acres) and disturbed/developed areas (up to 22.6 acres) within the staging yard may affect potential foraging habitat for golden eagle and potential habitat for burrowing owl. However, this roadside yard is not expected to provide an important or high-quality use area.

Hathaway 2 Staging Yard (Segment 5; Riverside County, WR-MSHCP). Use of the area may result in impacts to forbland/grassland (up to 14.3 acres) within the staging yard, and may affect foraging habitat for golden eagle and potential habitat for burrowing owl. However, this roadside yard is not expected to provide an important or high-quality use area.

Matich Material and Equipment Staging Yard (Segment 5; Riverside County, WR-MSHCP). The site has historically been used as an equipment and materials yard. The surface is approximately 50 percent concrete (paved) and 50 percent friable soil. A field visit on February 17, 2016 found that the non-paved portions of the yard have some disturbed and ruderal vegetation. There is a strip of vegetation, measuring approximately 50 by 500 feet, along the east side of the yard, adjacent to North Hathaway Street, which appears to be less disturbed and may retain some native habitat value. Los Angeles pocket mouse (*Perognathus longimembris brevinosus*) and northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) are present on Segment 5. Both of these pocket mice are California Species of Special Concern, and both are covered species under the WR-MSHCP. These species may occur in undisturbed habitat to the east of the yard and have some potential to occur within the yard. However, the yard is not expected to provide high quality habitat.

Devers Staging Yard (Segment 6; Riverside County, CV-MSHCP). Use of the area may result in impacts to disturbed desert scrub (up to 10.0 acres) and may affect potential foraging habitat for golden eagle and

potential habitat for burrowing owl and desert tortoise. However, the staging yard site is already mostly disturbed and developed, and habitat quality is relatively low.

D.5.1.2.1 Segment 1: San Bernardino

The most important native habitat areas in Segment 1 are at the southern end, around Scotts Canyon and San Bernardino Junction. In this area, the ROW crosses undeveloped hilly terrain crisscrossed by dirt roads and trails. Habitat consists mainly of non-native grassland with some coastal sage scrub and chaparral; see Figures Ap.7-2a through Ap.7-2k, Land Cover (Appendix 7). Habitat in the San Bernardino Junction area, where Segments 1, 2, and 3 come together, is described under Segment 2, below.

Special-status Wildlife

Several special-status species have a high potential to occur on Segment 1, and four were observed: coastal western whiptail (*Aspidoscelis tigris stejnegeri*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), western mastiff bat (*Eumops perotis*), and northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*). A number of special-status wildlife species have a low or moderate potential to occur within Segment 1, including Swainson's hawk, western yellow-billed cuckoo, burrowing owl, American peregrine falcon, southwestern willow flycatcher, little willow flycatcher, and Stephens' kangaroo rat.

Swainson's hawk has a moderate potential to pass through the area of Segment 1 during migration, but is unlikely to nest there. There is minimal to no suitable nesting habitat and the Proposed Project study area is outside the species' known breeding range.

Western yellow-billed cuckoo has a low potential to forage on Segment 1 and is unlikely to nest there. It has been observed within 5 miles of the ROW (GANDA, 2011), but there is minimal suitable habitat for foraging and no suitable habitat for nesting.

Burrowing owl has a moderate potential for occurrence on Segment 1. There is potentially suitable habitat present and documented occurrences within 5 miles of the ROW (GANDA, 2011). Surveys did not detect burrowing owl in the project area.

American peregrine falcon has been observed foraging in the Proposed Project study area (LSA, 2013b), and has a moderate potential to forage on Segment 1. There is limited suitable natural nesting habitat, although peregrine falcon may occasionally nest on transmission towers or other structures.

Southwestern willow flycatcher has a low potential to forage on Segment 1 and is unlikely to nest there. There are documented occurrences within 5 miles of the ROW (GANDA, 2011), but suitable foraging habitat is very limited and suitable nesting habitat is probably lacking.

Little willow flycatcher has a moderate potential to pass through the area of Segment 1 during migration, but is unlikely to nest there. There is minimal to no suitable nesting habitat and the Proposed Project study area is outside the species' known breeding range.

Stephens' kangaroo rat (SKR) has a moderate potential for occurrence on Segment 1. There is a small amount of potentially suitable habitat at the southernmost end of the segment, and several documented occurrences within 5 miles of the ROW (GANDA, 2011). During trapping surveys, one SKR was found on Segment 3 within 2 miles of the south end of Segment 1. No SKR were found during trapping surveys on Segment 1 (LSA, 2013b, Appendix L).

Wildlife Movement

There is limited undeveloped habitat available in the Badlands at the southernmost end of Segment 1. The Badlands include natural habitat blocks and also form a habitat linkage that provides connectivity among other blocks of habitat (see Wildlife Movement in Section D.5.1.1).

D.5.1.2.2 Segment 2: Colton and Loma Linda

The west end of Segment 2 crosses developed and residential areas. The remainder of the segment crosses undeveloped hilly terrain south of Loma Linda. The area is crisscrossed by dirt roads and trails. Habitat consists mainly of non-native grassland with some patches of coastal sage scrub and chaparral; see Figures Ap.7-2a through Ap.7-2k, Land Cover (Appendix 7).

Special-status Wildlife

Several special-status species have a high potential to occur within Segment 2, including burrowing owl and coastal California gnatcatcher. Four special-status species were observed on Segment 2 (coastal western whiptail, southern California rufous-crowned sparrow, western mastiff bat, and northwestern San Diego pocket mouse (Table Ap.7-2 in Appendix 7; LSA, 2013b). Figures Ap.7-3a through Ap.7-3k, Special-status Species Observations (Appendix 7), show the locations where these species were observed. A number of additional special-status wildlife species have a low or moderate potential to occur within Segment 2, including golden eagle, Swainson's hawk, western yellow-billed cuckoo, American peregrine falcon, southwestern willow flycatcher, and Stephens' kangaroo rat.

Golden eagle has a low potential for occurrence on Segment 2. Foraging habitat is potentially present on the ROW and natural nesting habitat is potentially present within 4 miles of the ROW. Golden eagles may occasionally nest on large transmission towers, but the potential for nesting on the ROW is low.

Swainson's hawk has a moderate potential to pass through the area of Segment 2 during migration, but is unlikely to nest there. There is some potentially suitable nesting habitat, but the Proposed Project study area is outside the species' known breeding range.

Western yellow-billed cuckoo has a moderate potential to forage on Segment 2, and is unlikely to nest there. It has been observed within 5 miles of the ROW (GANDA, 2011), but there is minimal suitable habitat for foraging and no suitable habitat for nesting.

Burrowing owl has a high potential for occurrence on Segment 2. There is potentially suitable habitat present and documented occurrences occur within 5 miles of the ROW (GANDA, 2011).

American peregrine falcon has been observed foraging in the Proposed Project study area (LSA, 2013b), and has a moderate potential to forage on Segment 2. There is limited suitable natural nesting habitat, although peregrine falcon may occasionally nest on transmission towers or other structures.

Southwestern willow flycatcher has a low potential to forage on Segment 2 and is unlikely to nest there. There are documented occurrences within 5 miles of the ROW (GANDA, 2011), but suitable foraging habitat is very limited and suitable nesting habitat is probably lacking.

Little willow flycatcher has a moderate potential to pass through the area of Segment 2 during migration, but is unlikely to nest there. There is limited suitable nesting habitat and the Proposed Project study area is outside the species' known breeding range.

Coastal California gnatcatcher (CAGN) has a high potential for occurrence on Segment 2. Most of Segment 2 passes through designated critical habitat for CAGN (Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas in Appendix 7). There are several recent CAGN reports in the project vicinity, about 2 miles south of the ROW near Reche Canyon in 1997 (three pairs) and 2000 (one male; CNDDDB, 2014), and additional occurrences within 5 miles of the ROW (GANDA, 2011). No CAGN were detected in the Proposed Project study area during protocol surveys conducted in 2012 and 2013 (LSA, 2013b). Note that CAGN was included in Appendix Q, Wildlife Species Detected List, of the *Biological Resources Technical Report* (LSA, 2013b) in error and was not detected in the Proposed Project study area during biological surveys (SCE, 2014). Although CAGN was not detected during field surveys, there is suitable habitat on the ROW and in the vicinity and there are recent records nearby, supporting the conclusion that CAGN has a high probability of occurring in the project area.

SKR has a moderate potential for occurrence on Segment 2 but no SKR were found during trapping surveys on Segment 2 (LSA, 2013b, Appendix L). There is potentially suitable habitat throughout the western part the segment, and several documented occurrences in the Proposed Project vicinity. During trapping surveys, one SKR was found on Segment 3, within 2 miles of Segment 2.

Wildlife Movement

The eastern end of Segment 2 is within the Badlands. The Badlands include natural habitat blocks and also form a habitat linkage that provides connectivity among other blocks of habitat (see Wildlife Movement in Section D.4.1.1).

D.5.1.2.3 Segment 3: San Timoteo Canyon

The majority of Segment 3 is in the hilly terrain of the Badlands south of Loma Linda, Redlands, and Calimesa. The area is crisscrossed by dirt roads and trails, and habitat consists mainly of non-native grassland, coastal sage scrub, and chaparral. There is also riparian woodland along San Timoteo Canyon; see Figures Ap.7-2a through Ap.7-2k, Land Cover (Appendix 7). Vegetation and habitat in the San Bernardino Junction area, where Segments 1, 2, and 3 come together, is included in the discussion of Segment 2.

Special-status Wildlife

Several special-status wildlife species have a high potential to occur, including western yellow-billed cuckoo and burrowing owl, and a number of special-status species were observed on Segment 3, including golden eagle, Swainson's hawk, white-tailed kite, little willow flycatcher, least Bell's vireo, and Stephens' kangaroo rat (Table Ap.7-2, in Appendix 7; LSA, 2013b). Figures Ap.7-3a through Ap.7-3k, Special-status Species Observations (Appendix 7), show the locations where these species were observed. A number of special-status wildlife species have a low or moderate potential to occur within Segment 3, including bald eagle, American peregrine falcon, southwestern willow flycatcher, and coastal California gnatcatcher.

Golden eagle has been observed foraging near El Casco Substation on or near Segment 3. Natural nesting habitat is potentially present within 4 miles of the ROW. Golden eagles may occasionally nest on large transmission towers, but the potential for nesting on the ROW is low.

Swainson's hawk has been observed on or near Segment 3 during migration, but is unlikely to nest there. There is potentially suitable nesting habitat, but the Proposed Project study area is outside the species' known breeding range.

White-tailed kite has been observed foraging near El Casco Substation and in riparian habitat on Segment 3. Suitable nesting habitat is present within the Proposed Project study area and white-tailed kite has a high potential to nest there.

Bald eagle has occasionally been observed in the area of Segment 3 and suitable wintering habitat is present. This species has a low potential to forage on Segment 3 during the winter. There is no suitable nesting habitat on the segment, and bald eagle is unlikely to nest there.

Western yellow-billed cuckoo has a low potential for nesting on Segment 3. It nests in extensive stands of dense riparian woodlands, and habitat within the Proposed Project study area appears unsuitable for nesting (LSA, 2013b). Western yellow-billed cuckoo has been observed in riparian habitat at San Timoteo Creek south of El Casco Substation (CPUC, 2007), but nesting has never been documented there (Riverside County, 2003), and the reported observation was presumably a migrating individual.

Burrowing owl has a high potential for occurrence on Segment 3. There is potentially suitable habitat present and documented occurrences within 5 miles of the ROW (GANDA, 2011).

American peregrine falcon has been observed foraging in or near the Proposed Project study area (LSA, 2013b), and has a moderate potential to forage on Segment 3. There is limited suitable natural nesting habitat, although peregrine falcon may occasionally nest on transmission towers or other structures.

Southwestern willow flycatcher (SWFL) has a low potential for nesting on Segment 3. Some riparian areas in the Segment 3 may be marginally suitable for nesting. Designated critical habitat is located within 200 feet of the proposed telecommunications work along San Timoteo Canyon Road. No SWFL were detected during protocol surveys in 2012 (LSA, 2013b). Little willow flycatcher (*Empidonax traillii brewsteri*) has been reported from the Proposed Project area (Aspen, 2007), but the Proposed Project study area is outside the known breeding range (LSA, 2013b). It was not observed during biological surveys (LSA, 2013b). Both willow flycatcher subspecies could use riparian habitat on the ROW as stopover habitat during migration.

Little willow flycatcher has been observed on or near Segment 3 during migration, but is unlikely to nest there. There is limited suitable nesting habitat and the Proposed Project study area is outside the species' known breeding range.

Least Bell's vireo has been detected in riparian habitat at San Timoteo Creek (Aspen, 2007; LSA, 2012), where it occupied breeding territories within the Proposed Project study area in riparian/riverine habitat in Segments 3 and 4 (LSA, 2013b).

Coastal California gnatcatcher (CAGN) has a moderate potential for occurrence on Segment 3. Coastal sage scrub habitat is present in patches along most of the segment. The recent documented occurrences noted under Segment 2 (Section D.4.1.2.2) are within approximately 2 miles of Segment 3. No CAGN were detected in the Proposed Project study area during protocol surveys conducted in 2012 and 2013 (LSA, 2013b). Protocol surveys were done only in the San Bernardino County portion of Segment 3 (approximately MP 5.2 to 8.8), and not in the Riverside County portion of Segment 3 (approximately MP 8.8 to 15.2). Rotenberry et al. (2006) modeled habitat suitability for CAGN in western Riverside County. This model uses 21 environmental variables to calculate an index to depict the similarity of mapped habitat to known, occupied CAGN locations. Based on that analysis, CAGN habitat is potentially present along the ROW in western Riverside County, particularly in Segments 3 and 4 through the Badlands.

There is potentially suitable habitat for Stephens' kangaroo rat (SKR) throughout much of the segment, and one SKR was trapped near MP 6.5 during trapping surveys on Segment 3 (LSA, 2013b, Appendix L).

Wildlife Movement

Segment 3 is within the Badlands east of Moreno Valley. The Badlands include natural habitat blocks and also form a habitat linkage that provides connectivity among other blocks of habitat (see Wildlife Movement in Section D.4.1.1).

D.5.1.2.4 Segment 4: Beaumont and Banning

Habitat along Segment 4 is mainly developed/disturbed, grassland/forbland, or agriculture. There are areas of riparian woodland, coast live oak woodland, and chaparral on the west end near San Timoteo Creek, and chaparral, coastal sage scrub, and alluvial scrub on the east end near the San Gorgonio River; see Figures Ap.7-2a through Ap.7-2k, Land Cover (Appendix 7).

Special-status Wildlife

Special-status wildlife species observed or with potential to occur within Segment 4 are shown in Table Ap.7-2 (in Appendix 7) and locations of observations are mapped on Figures Ap.7-3a through Ap.7-3k (Appendix 7). Species occurring or potentially occurring include: golden eagle, American peregrine falcon, Swainson's hawk, white-tailed kite, burrowing owl, least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, coastal California gnatcatcher, Stephens' kangaroo rat, and desert kit fox.

Golden eagle has been observed foraging near El Casco Substation on or near Segment 4. An active nest was detected within approximately 1.5 miles of the Proposed Project study area during focused surveys in 2013 (WRI, 2013). Golden eagles may occasionally nest on large transmission towers, but the potential for nesting on the ROW is low.

Swainson's hawk has been observed on or near Segment 4 during migration, but is unlikely to nest there. There is potentially suitable nesting habitat, but the Proposed Project study area is outside the species' known breeding range.

White-tailed kite has been observed foraging near El Casco Substation and in riparian habitat on Segment 4. Suitable nesting habitat is present within the Proposed Project study area and white-tailed kite has a high potential to nest there.

Western yellow-billed cuckoo has a high potential to forage on Segment 4, and a low potential to nest there. It nests in extensive stands of dense riparian woodlands, and habitat within the Proposed Project study area appears unsuitable for nesting (LSA, 2013b). Although the species has been observed in riparian habitat along San Timoteo Creek south of El Casco Substation (Aspen, 2007), nesting has never been documented there (Riverside County, 2003).

Burrowing owl has a high potential for occurrence on Segment 4. There is suitable habitat present and there are documented occurrences within 5 miles of the ROW (GANDA, 2011).

American peregrine falcon has been observed foraging in or near the Proposed Project study area (LSA, 2013b), and has a moderate potential to forage on Segment 4. There is limited suitable natural nesting habitat, although peregrine falcon may occasionally nest on transmission towers or other structures.

Southwestern willow flycatcher (SWFL) has a moderate potential for foraging on Segment 4. Some riparian areas in the Proposed Project study area may be marginally suitable for nesting, and SWFL has a low potential for nesting there. No SWFL were detected during protocol surveys in 2012 (LSA, 2013b).

Little willow flycatcher has been observed on or near Segment 4 during migration, but is unlikely to nest there. There is limited suitable nesting habitat and the Proposed Project study area is outside the species' known breeding range.

Least Bell's vireo has been detected in riparian habitat along San Timoteo Creek (Aspen, 2007; LSA, 2012). Breeding territories were documented within the Proposed Project study area in riparian/riverine habitat along the creek in Segments 3 and 4, and least Bell's vireo also may breed within similar habitat around a drainage identified in 2013 south of the City of Beaumont in Segment 4, where a singing male was detected in 2013 (LSA, 2013b).

Coastal California gnatcatcher has a moderate potential for occurrence on Segment 4. Suitable habitat is present and there is a reported occurrence at Oak Creek development in 1999 (SCE, 2014). Protocol surveys were not conducted on Segment 4. Rotenberry et al. (2006) modeled habitat suitability for CAGN in western Riverside County. This model uses 21 environmental variables to calculate an index to depict the similarity of mapped habitat to known, occupied CAGN locations. Based on that analysis, CAGN habitat may be present along the ROW in western Riverside County, particularly in Segments 3 and 4 through the Badlands.

Stephens' kangaroo rat has a moderate potential to occur on Segment 4. Suitable habitat is present, and there are documented occurrences within 5 miles of the ROW (GANDA, 2011). The species was not found during trapping surveys in 2012 and 2013 (LSA, 2013b, Appendix L).

Desert kit fox has a moderate potential to occur at the eastern end of Segment 4. There is potentially suitable habitat present, although Segment 4 is near the western margin of its geographic range.

Wildlife Movement

Much of Segment 4 is within or adjacent to developed areas. There may be some localized movement of resident animals within or through the habitat in Segment 4. The east end of Segment 4 is located in the San Gorgonio Pass area. The San Gorgonio Pass is an important corridor for migrating birds and serves as a connection between coastal lowlands and Colorado Desert lowlands. This is true for many species of landbirds that normally travel at night, as well many species of waterbirds that travel by day or night. Seasonally, springtime is the most critical time for migrating birds in the Proposed Project study area, as the Coachella Valley and surrounding ranges serve to funnel northbound animals to the northwest and west through the pass.

D.5.1.2.5 Segment 5: Morongo Tribal Lands and Surrounding Areas

Segment 5 runs mainly through open space, with scattered rural residential housing, and a short section that is adjacent to the Cabazon Outlet Mall. Desert scrub is found along most of the segment. Alluvial scrub occupies the San Gorgonio River wash and the smaller drainages. There are small areas of riparian vegetation in Robertson's Plant 66 and along a short section of the San Gorgonio River; see Figures Ap.7-2a through Ap.7-2k, Land Cover (Appendix 7).

Special-status Wildlife

Special-status wildlife species occurring or potentially occurring within Segment 5 include: Sierra Madre (mountain) yellow-legged frog, desert tortoise, golden eagle, burrowing owl, Swainson's hawk, western yellow-billed cuckoo, American peregrine falcon, desert kit fox, and Nelson's bighorn sheep (non-peninsular population). See Table D.4-3 (Section D.4) and Figure Ap.7-4 (Appendix 7).

The Sierra Madre (mountain) yellow-legged frog has a low potential for occurrence on Segment 5. It was reported from the San Gorgonio River, approximately 2.5 miles south of the ROW, but the habitat where the transmission line would span the San Gorgonio River is not suitable (CPUC and BLM, 2006). This frog has also been reported from the pond(s) in Robertson's Plant 66 gravel mine (CPUC and BLM, 2006). The pond(s) in the gravel mine are isolated from the San Gorgonio River and subject to disturbance from the mining operation. There are no known populations at this location, and Aspen biologists have been unable to confirm this report. It is likely this report is in error.

Protocol surveys were done for desert tortoise in 2011, 2012, and 2013. Desert tortoise and tortoise sign were found on the east end of Segment 5, east of Deep Creek Road (LSA, 2013b).

The active golden eagle nest near Segment 4 is within 4 miles of portions of Segment 5. Golden eagles have been observed foraging on Segment 5 within the Morongo reservation (LSA, 2010; LSA, 2012).

Swainson's hawk may pass through the area of Segment 5 during migration, but is unlikely to nest there.

Western yellow-billed cuckoo has a low potential to forage on Segment 5, and is unlikely to nest there. It has not been documented within 5 miles of the ROW (GANDA, 2011), and there is minimal suitable habitat for foraging and no suitable habitat for nesting.

Burrowing owl and suitable burrow sites have been observed on Segment 5 (GANDA, 2010; LSA, 2010, 2012, 2013a).

American peregrine falcon has been observed foraging in the Proposed Project study area (LSA, 2013b), and has a moderate potential to forage on Segment 5. There is limited suitable natural nesting habitat within the ROW (although peregrine falcon may occasionally nest on transmission towers or other structures) but suitable habitat is present on the steep north-facing slopes of the San Jacinto Mountains, south of the ROW.

Desert kit fox has a moderate potential to occur on Segment 5. There is suitable habitat present.

Nelson's bighorn sheep (non-peninsular population) has a moderate potential to occur on Segment 5. Suitable foraging habitat is potentially present on or near the ROW and the species occurs in the San Bernardino Mountains north of the ROW near Whitewater.

Wildlife Movement

Segment 5 mainly runs through open space along the foothills of the San Bernardino Mountains. Just to the south are the San Jacinto Mountains; however, the I-10 freeway is a barrier to most terrestrial wildlife movement between the two mountain ranges. Freeway undercrossings at the wash areas may provide some biological connectivity, but wildlife movement across the segment is probably limited.

Segment 5 is located in the San Gorgonio Pass area. The San Gorgonio Pass is an important corridor for migrating birds and serves as a connection between coastal lowlands and Colorado Desert lowlands. This is true for many species of landbirds that normally travel at night, as well many species of waterbirds that travel by day or night. Seasonally, springtime in the Proposed Project study area is the most critical time for migrating birds, as the Coachella Valley and surrounding ranges serve to funnel northbound animals to the northwest and west through the pass.

D.5.1.2.6 Segment 6: Whitewater and Devers

Segment 6 passes mainly through undeveloped open space and rural residential development east of Whitewater Canyon; it passes through wind energy projects (wind farms), ending at the Devers Substation. Habitat is mainly desert scrub, with alluvial scrub along the Whitewater River and other drainages,

and aeolian sand habitat east of the Whitewater River; see Figures Ap.7-2a through Ap.7-2k, Land Cover and Figure Ap.7-4, Aeolian Habitat (in Appendix 7).

Special-status Wildlife

Special-status wildlife occurring or potentially occurring within Segment 6 include Casey's June beetle, Sierra Madre (mountain) yellow-legged frog, desert tortoise, Coachella Valley fringe-toed lizard, golden eagle, Swainson's hawk, American peregrine falcon, western yellow-billed cuckoo, burrowing owl, desert kit fox, and Nelson's bighorn sheep (non-peninsular population). See Table Ap.7-2 and Figures Ap.7-3a through Ap.7-3k (in Appendix 7).

- Casey's June beetle has a low potential for occurrence on Segment 6. There may be suitable habitat present, but the ROW is outside its known range. There is a documented occurrence within 5 miles of the ROW (GANDA, 2011), but the distribution of Casey's June beetle appears to be limited to the mouth and alluvial floodplain of Palm Canyon, within and just south of Palm Springs (AMEC, 2012c).
- The Sierra Madre (mountain) yellow-legged frog has a low potential for occurrence on Segment 6. There is a documented occurrence in the Whitewater River, approximately 3 miles north of I-10, but the habitat where the ROW crosses Whitewater Canyon is probably not suitable for this species due to intermittent surface flow. This species was not found during biological surveys (AMEC, 2012a).
- Protocol surveys were done for desert tortoise in 2011, 2012, and 2013. Desert tortoise and tortoise sign were found occasionally throughout Segment 6 (AMEC, 2012b; LSA, 2013b).
- The Coachella Valley fringe-toed lizard has a low potential for occurrence on Segment 6. There is marginally suitable habitat along the ROW east of the Whitewater River. There are several documented occurrences with 5 miles of the ROW. This species was not found during biological surveys (AMEC, 2012a).
- No active or inactive golden eagle nests were detected within 4 miles of the ROW in Segment 6, but potentially suitable nesting habitat is present in the vicinity, and active and potentially active nests were observed within 10 miles of the ROW (WRI, 2013). Golden eagles were observed flying over the Whitewater River area (LSA, 2012) and may forage in Segment 6.
- Swainson's hawk has a high potential to pass through the area of Segment 6 during migration, but is unlikely to nest there.
- Western yellow-billed cuckoo has a low potential to forage on Segment 6, and is unlikely to nest there. It has not been documented within 5 miles of the ROW (GANDA, 2011), and there is minimal suitable habitat for foraging and no suitable habitat for nesting.
- Burrowing owl and burrow sites have been observed on Segment 6 (GANDA, 2010; AMEC, 2012b; LSA, 2012, 2013a).
- American peregrine falcon has been observed foraging in the Proposed Project study area (LSA, 2013b), and has a moderate potential to forage on Segment 6. There is limited suitable natural nesting habitat, although peregrine falcon may occasionally nest on transmission towers or other structures.
- Desert kit fox has a moderate potential to occur on Segment 6. There is suitable habitat present.
- Nelson's bighorn sheep (non-peninsular population) has a moderate potential to occur on Segment 6. Suitable foraging habitat is present on or near the ROW and the species occurs in the hills north of the ROW near Whitewater.

Wildlife Movement

Segment 6 mainly runs through open space along the foothills and bajadas of the San Bernardino Mountains and into the western edge of the Colorado Desert. Just to the south are the San Jacinto Mountains; however, the I-10 freeway is a barrier to most terrestrial wildlife movement between the two mountain ranges. Freeway undercrossings at the wash areas may provide some biological connectivity, but wildlife movement across the segment is probably limited.

Segment 6 is located in the San Gorgonio Pass area. The San Gorgonio Pass is an important corridor for migrating birds and serves as a connection between coastal lowlands and Colorado Desert lowlands. This is true for many species of landbirds that normally travel at night, as well many species of waterbirds that travel by day or night. Seasonally, springtime is the most critical time for migrating birds in the Proposed Project study area, as the Coachella Valley and surrounding ranges serve to funnel northbound animals to the northwest and west through the pass.

D.5.1.3 Environmental Setting for Connected Actions

Biological resources information on connected solar projects is derived from the Palen Solar Electric Generating System Draft Supplemental EIS (BLM, 2013, Sections 3.23 and 4.21), Palen Solar Power Project Presiding Member's Proposed Decision (CEC, 2010, Section VI.A), Desert Harvest Solar Farm Final EIS (BLM, 2012, Sections 3.4 and 4.4), Blyth Mesa Solar Project Draft EIR/EA (BLM and Riverside County, 2014, Sections 3.2.4 and 4.2.4), and the West of Devers Project PEA (SCE, 2013).

Each of the areas in which connected projects are located is describe in Section D.4.1.3. Biological Resources – Vegetation.

Desert Center Area. Reptiles typically found in the Desert Center area include desert horned lizard (*Phrynosoma platyrhinos*), zebra-tailed lizard (*Callisaurus draconoides*), desert iguana (*Dipsosaurus dorsalis*), and sidewinder (*Crotalus cerastes*). Common bird species include verdin (*Auriparus flaviceps*), black-throated sparrow (*Amphispiza bilineata*), Gambel's quail (*Callipepla gambelii*), common raven, red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*). Frequently observed mammals are coyote, round-tailed ground squirrel (*Xerospermophilus tereticaudus*), desert woodrat (*Neotoma lepida*), and Merriam's kangaroo rat (*Dipodomys merriami*).

Special-status wildlife. The federal and state-listed desert tortoise is found in the area. Other state listed species that may occur in the area are, Swainson's hawk (*Buteo swainsoni*; state threatened, occurs during seasonal migration), and Gila woodpecker (*Melanerpes uropygialis*; state endangered, rarely documented locally, at the edge of its geographic range). USFWS has designated critical habitat in Riverside County for a number of special status species, including desert tortoise. Examples of other non-listed special-status wildlife are Mojave fringe-toed lizard (*Uma scoparia*; CSC), Couch's spadefoot toad (*Scaphiopus couchii*; CSC), golden eagle (*Aquila chrysaetos*; Fully Protected), prairie falcon (*Falco mexicanus*; CDFW Watch List [WL]), American badger (*Taxidea taxus*; CSC), and burrowing owl.

For the Desert Harvest project, two listed species, Gila woodpecker and Swainson's hawk, have been observed on the project site or vicinity, and desert tortoise is known to occur in the area. The non-listed special-status species that have been observed are sharp-shinned hawk (*Accipiter striatus*; WL), burrowing owl, Vaux's swift (*Chaetura vauxi*; CSC), prairie falcon, loggerhead shrike (*Lanius ludovicianus*; CSC), scrub jay (Eagle Mountains population, *Aphelocoma californica cana*; WL), Lucy's warbler (*Oreothlypis luciae*; CSC), osprey (*Pandion haliaetus*; WL), black-tailed gnatcatcher (*Polioptila melanura*; CDFW Special Animal), Palm Springs round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*; CSC), American badger, and desert kit fox (*Vulpes macrotis arsipus*; California Protected Furbearing Mammal). Many

other special-status species were not observed, but have the potential to be found in the project area and vicinity.

Wildlife movement. Please see Section D.5.1.1 for a general discussion of wildlife movement and biological connectivity. Within the Desert Center area, the valley floor provides an important wildlife corridor linking mountain ranges. Opportunity for wildlife movement among mountain ranges to the north and south of the Chuckwalla Valley is significantly impeded by the I-10 freeway and the Colorado River Aqueduct. The aqueduct, as an uncovered surface canal, is an impassable barrier to terrestrial wildlife. Wildlife can cross at periodic “siphon points” where the aqueduct is underground. Culverts under the freeway provide a way for wildlife to safely traverse this barrier. Evidence indicates that the culverts and associated major washes are used by a variety of large and small wildlife.

Other impediments to wildlife movement in the project vicinity include residential land uses, an abandoned quarry, agricultural lands, and the perimeter fencing around large solar projects. Even with these impediments to biological connectivity, there is opportunity for wildlife species to move through the area via washes and culverts beneath the I-10 Freeway, siphon points along the aqueduct, and remaining open space areas. Movement opportunity varies for each species, depending on motility and behavioral constraints, as well as landscape impediments.

Blythe Area. Wildlife commonly observed in this area includes desert ironclad beetle (*Asbolus verrucosus*), side-blotched lizard, desert iguana, and western whiptail (*Aspidoscelis tigris*). Frequently observed birds include common raven and great-tailed grackle (*Quiscalus mexicanus*). Coyote and white-tailed antelope squirrel (*Ammospermophilus leucurus*) are common mammals. Large numbers of migratory birds pass through the Blythe area during seasonal migrations along the Colorado River corridor. In addition, waterfowl and wading birds overwinter in the area, making use of extensive wetland habitat in the Colorado River Valley.

Special-status wildlife. The desert tortoise is an example of a federal and state-listed species found in the area and the USFWS has designated critical habitat in Riverside County for a number of special status species, including desert tortoise. In addition to year-around resident species, many listed threatened or endangered birds winter, breed, or migrate through the region. For example, the greater sandhill crane, listed as threatened under the CESA and fully protected in California, winters in the lower Colorado River Valley. Examples of non-listed special-status wildlife are Mojave fringe-toed lizard, Le Conte’s thrasher, loggerhead shrike, burrowing owl, golden eagle, Nelson’s bighorn sheep (*Ovis canadensis nelsoni* [non-Peninsular population]; Fully Protected), American badger, and desert kit fox.

Wildlife movement. Please see Section D.5.1.1 for a general discussion of wildlife movement and biological connectivity. In the largely undeveloped portions of the Blythe area, wildlife habitat is available in extensive open space areas, but specific barriers, such as the I-10 freeway, may impede or prevent wildlife movement. In some areas, culverts or other linkages provide a way for wildlife to safely traverse such barriers. Urban or agricultural development in the area limits wildlife use and movement for many species. The Lower Colorado River Valley, encompassing Blythe and the surrounding area, includes uplands, floodplain, wetland, and agricultural habitats. The valley is an important migratory route for numerous birds, as well as a breeding and wintering stopover destination. Every spring and fall, millions of birds migrate through the region, a branch of the Pacific Flyway that stretches from the western Arctic to Central and South America.

D.5.2 Applicable Regulations, Plans, and Standards

Most of the key federal, state, and local regulations, plans, and standards applicable to this analysis of wildlife resources are summarized in Section D.4.2 (Vegetation). The following additional regulations, plans, and standards also apply to wildlife resources.

D.5.2.1 Federal

Migratory Bird Treaty Act (16 USC Sections 703-711). Prohibits take of any migratory bird, including eggs or active nests, except as permitted by regulation (e.g., licensed hunting of waterfowl or upland game species). Under the Migratory Bird Treaty Act (MBTA), “migratory bird” is broadly defined as “any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle” and thus applies to most native bird species.

Bald and Golden Eagle Protection Act (16 USC Section 668). Prohibits the take, possession, and commerce of bald eagles and golden eagles. Under the Bald and Golden Eagle Protection Act (BGEPA) and subsequent rules published by the USFWS, “take” may include actions that injure an eagle, or affect reproductive success (productivity) by substantially interfering with normal behavior or causing nest abandonment. The USFWS may authorize incidental take of bald and golden eagles for otherwise lawful activities.

D.5.2.2 State

Fully Protected Designations (Fish and Game Code Sections 3511, 4700, 5515, and 5050). Designates 36 fish and wildlife species as “fully protected” from take, including hunting, harvesting, and other activities. The CDFW may only authorize take of designated fully protected species through a Natural Community Conservation Plan (NCCP).

Native Birds (Fish and Game Code Sections 3503, 3503.5, and 3513). Prohibits take, possession, or needless destruction of birds, nests, or eggs except as otherwise provided by the code. Section 3513 provides for the adoption of the MBTA’s provisions (above).

Protected Furbearers (California Code of Regulations Title 14 Section 460). Specifies that “[f]isher, marten, river otter, desert kit fox and red fox may not be taken at any time.” The CDFW may permit capture or handing of these species for scientific research, but does not issue Incidental Take Permits for other purposes.

D.5.3 Environmental Impacts of the Proposed

The objective of the impact analysis is to identify, describe, and (where feasible) quantify the Proposed Project’s expected impacts to wildlife resources. This impact analysis is based on the wildlife resources described in the Environmental Setting / Affected Environment section above and on the Description of the Proposed Project in Section B. This analysis incorporates PEA Section 4.4.5, Impacts Analysis, as well as independent review and analysis of the Proposed Project’s expected impacts to each resource.

Section D.5.3.1 describes the approach to evaluating wildlife resources impacts, including quantification where feasible, and describes other metrics or approaches which may be used in comparison of impacts among project alternatives. Section D.5.3.2 lists the criteria for evaluation of each impact. Section D.5.3.3, Impact Analysis and Mitigation Measures, describes the Proposed Project’s expected direct and indirect effects to wildlife resources. In addition, it specifies feasible mitigation measures that would reduce these impacts.

D.5.3.1 Approach to Impact Assessment

The Proposed Project includes a construction phase, projected to take place over approximately 36 to 48 months. Following construction, temporary disturbance areas would be revegetated. Revegetation efforts, along with implementation and monitoring of other mitigation measures identified herein would necessitate ongoing vehicle access and soil disturbance beyond the completion of construction. This phase is referred to as the Proposed Project’s “restoration” phase in the following analysis.

Additionally, vehicle access and other project activities would continue during operation and maintenance (O&M), throughout the life of the Proposed Project. Each potential impact to wildlife resources is described, to indicate whether it is a direct or indirect impact; whether its effects would be permanent, long-term or short-term; and whether it would occur during one or more of the Proposed Project’s phases, including construction, restoration, or O&M.

Direct impacts are the direct or immediate effects of the Proposed Project on wildlife resources. Examples of direct impacts include mortality, injury, or displacement of special-status animals; loss or degradation of native habitat; interference with fish and wildlife movement or migration; and disturbance to wildlife and habitat from noise and light. Indirect impacts are those effects that are caused by or will result from the Proposed Project, later in time or farther removed in distance, but are still reasonably certain to occur. Examples of indirect effects to native habitat include erosion, sedimentation, and introduction of invasive species that may cause habitat degradation. An example of an indirect effect to wildlife is increased predation due to certain habitat alterations (e.g., perch sites or “subsidies” for predators).

D.5.3.1.1 Applicant Proposed Measures

The PEA includes a series of Applicant Proposed Measures (APMs) to which SCE has committed in order to reduce potential impacts to biological resources. The APMs are considered to be part of the Proposed Project and they are assumed to be implemented in this evaluation of impacts to wildlife resources. The APMs specifically addressing wildlife impacts are presented in Table D.5-1. Other APMs related to wildlife resources, including habitat restoration and monitoring, are listed by title only in Table D.5-1 and the full text is provided in Table D.4-3 (Section D.4.3.1). All of the Biological Resources APMs have been superseded by mitigation measures that add requirements and provide details not found in the APMs.

Table D.5-1. Applicant Proposed Measures – Biological Resources – Wildlife

APM	Text
APM BIO-1	Revegetation Plan. Please see Table D.4-3 for full text.
APM BIO-2	Biological Monitoring. Please see Table D.4-3 for full text.
APM BIO-3	<p>Nesting Birds. SCE would prepare and implement a Nesting Bird Management Plan to address nesting birds undertaken in collaboration with the CDFW, USFWS, and BLM. The Plan would be an adaptive management plan that may be updated as needed if improvements are identified or conditions in the field change. The Plan would include the following: nest management and avoidance, field approach (survey methodology, reporting, and monitoring), and the Project avian biologist qualifications. The avian biologist would be responsible for oversight of the avian protection activities including the biological monitors.</p> <p>In order to minimize impacts to nesting birds during nesting season, pre-construction surveys and regular sweep surveys of active construction areas by a qualified biologist would focus on breeding behavior and a search for active nests within 500 feet of the project disturbance areas where survey access is not limited.</p> <ul style="list-style-type: none"> (a) For vegetation clearing that needs to occur during the typical nesting bird season (February 1 to August 31; as early as January 1 for raptors) qualified biologists would conduct nesting bird surveys. If an active nest (e.g., nests with eggs or chicks) was located, the appropriate avoidance and minimization measures from the management plan would be implemented. If it is determined that removal of an active nest is required, the project avian biologist will evaluate the appropriate level of consultation with CDFW, USFWS, and BLM; (b) During the typical nesting bird season, SCE would conduct pre-construction clearance surveys no more than 14 days prior to initial start of construction and in accordance with the adaptive management plan, to determine the location of nesting birds and territories; (c) Nest monitoring would be conducted by Project biological monitors with knowledge of bird behavior under the direction of a BLM and/or CDFW approved avian biologist; (d) Nesting deterrents (e.g., mooring balls, netting, etc.) could be used for inactive nests where appropriate at the direction of the Project avian biologist; (e) A Project avian biologist would determine the appropriate buffer area around active nest(s) and provisions for buffer exclusion areas (e.g. highways, public access roads, etc.) along with construction activity limits. Unless restricted by the Project avian biologist, construction vehicles would be allowed to move through a buffer area with no stopping or idling. The Project avian biologist would determine, evaluate, and modify buffers as appropriate based on species tolerance and behavior, the potential disruptiveness of construction activities, and existing conditions; and (f) The Project biological monitor would observe and document implementation of appropriate buffer areas around active nest(s) during project activities. The active nest site and applicable buffer would remain in place until nesting activity concluded. Nesting bird status reports would be submitted according to the management plan.
APM BIO-4	<p>Burrowing Owl. A pre-construction, focused burrowing owl survey would be conducted no more than 30 days prior to commencement of ground-disturbing activities within suitable habitat to determine if any occupied burrows are present. If occupied burrows are found, adequate buffers shall be established around burrows. Adequate buffers would be determined by a Project Avian biologist based upon field conditions and resource agency guidelines for wintering burrows and breeding season burrows.</p> <p>SCE would develop a Burrowing Owl Management Plan for the Project. The Plan would include information related to construction monitoring, avoidance and minimization measures, relocation strategy, exclusionary devices, and reporting requirements.</p>

Table D.5-1. Applicant Proposed Measures – Biological Resources – Wildlife

APM	Text
APM BIO-5	<p>Desert Tortoise. In desert tortoise habitat in Segments 5 and 6, from Deep Creek Road east to Devers Substation, project personnel in non-desert tortoise exclusion fenced areas would be required to inspect for desert tortoises under vehicles prior to moving the vehicle. If a desert tortoise is found beneath a vehicle, the vehicle would not be moved until the tortoise leaves on its own accord, or if necessary, the tortoise may be moved by an Authorized Biologist. If a vehicle must be moved in the event of an emergency, placing a tortoise in harm's way, a USFWS Authorized Biologist may move the tortoise to an appropriate location.</p> <p>All burrows suitable for desert tortoise found during clearance surveys within project ground disturbance areas within desert tortoise habitat, whether occupied or vacant, that would be subject to construction-related disturbance, would be excavated by a Biologist authorized by USFWS, and collapsed or blocked to prevent desert tortoise reentry.</p> <p>All desert tortoise handling, including excavations of nests, would be conducted by a Biologist authorized by USFWS, in accordance with USFWS-approved protocol in compliance with appropriate regulatory permits.</p> <p>Desert tortoise exclusion fencing shall be installed around staging yards within suitable, occupied habitat according to USFWS recommended specifications (USFWS, 2005) and in compliance with appropriate regulatory permits.</p> <p>Trash and food items would be contained in closed containers during construction to discourage attracting opportunistic predators such as ravens.</p>
APM BIO-6	<p>Least Bell's Vireo, Southwestern Willow Flycatcher, & Western Yellow-billed Cuckoo. <i>Pre-construction:</i> In areas of potentially suitable riparian habitat for the least Bell's vireo (or other listed riparian birds), which occurs in Segment 3 and may occur in limited areas in Segment 4, SCE would conduct non-protocol pre-construction surveys no more than 7 days prior to commencing construction activities to determine the location of nests and territories. Survey areas would include potentially suitable habitat within a 500-foot buffer around project disturbance areas unless property access is not allowed.</p> <p><i>Buffer:</i> If active least Bell's vireo (or other listed riparian bird) nesting activity is identified, SCE's avian biologist would establish a buffer area where construction activities are prohibited around active least Bell's vireo nest(s) and would monitor construction activities to evaluate the adequacy of the buffer. The buffer would be established and may be subsequently adjusted based on construction activities, noise and disturbance levels in the area not attributable to construction, and observed behavior of individual vireos (or as specified by conditions established under a Biological Opinion issued by the U.S. Fish & Wildlife Service or as directed by provisions established under the WR-MSHCP if SCE obtains PSE status).</p> <p>As SCE intends to apply for PSE status, if granted, potential impacts to the least Bell's vireo would be mitigated by participation in the WR-MSHCP. SCE's participation would include following provisions and measures outlined in the WR-MSHCP. SCE would prepare a Determination of Biological Equivalent or Superior Preservation (DBESP) that would include conservation recommendations similar to those that would be established under a Biological Opinion. The Riverside Conservation Authority (RCA) would request USFWS and CDFW concurrence with the MSHCP "findings of consistency," as well as DBESP approval. Subsequent coordination on any biological issues would be handled through consultation with the RCA. The RCA would determine the need for additional consultation with the USFWS and CDFW.</p> <p>If SCE does not participate in the WR-MSHCP, then any temporary and permanent impacts to least Bell's vireo and its habitat that may occur in Segments 3 and 4 would be mitigated by obtaining an incidental take authorization under the Federal and State Endangered Species Acts and implementing relevant permit conditions.</p>
APM BIO-9	<p>Jurisdictional Water Permits. Please see Table D.4-3 for full text.</p>

Table D.5-1. Applicant Proposed Measures – Biological Resources – Wildlife

APM	Text
APM BIO-10	<p>Coastal California Gnatcatcher and Designated Critical Habitat. In San Bernardino County, SCE would develop construction minimization measures and habitat conservation measures to be incorporated into Section 7 consultation, with the intent to obtain take authorization for the expected minimal impact (based on negative surveys to date), as well as a finding of no adverse modification to Critical Habitat. Expected measures would include: pre-construction protocol surveys to identify the locations of any gnatcatchers; monitoring of all vegetation clearing in coastal sage scrub habitat or designated Critical Habitat in San Bernardino County; restoration of temporarily impacted coastal sage habitat; and additional restoration of degraded areas within the SCE right-of-way as compensation for permanent impacts to coastal sage scrub habitat, such that there is no net loss of habitat value for coastal California gnatcatcher in San Bernardino County.</p>
APM BIO-11	<p>Stephens' Kangaroo Rat. For portions of the Proposed Project within SKR habitat in Segments 2 and 3, from the San Bernardino Junction to the Riverside County line, avoidance and mitigation measures would be incorporated into conditions established in a Biological Opinion issued through Section 7 consultation with USFWS, which would be required to obtain incidental take authorization for the expected minimal impact (based on surveys to date). Expected measures would include: pre-construction protocol surveys to identify the locations of any SKR present and delineate extent of suitable habitat; monitoring by a qualified biologist during all vegetation clearing and ground disturbance in suitable habitat; flagging of potential burrows for avoidance where possible; covering all excavated, steep-walled holes or trenches more than 2 feet deep at the close of each working day with plywood or provide one or more escape ramps constructed of earth fill or wooden planks to prevent entrapment of SKR during construction; thorough inspection of construction pipes, poles, culverts, or similar structures with a diameter of 1.5 inches or greater stored at a construction site for one or more overnight periods shall be done by a qualified biologist for the presence of SKR before the construction pipes, poles, culverts, or similar structures is subsequently buried, capped, or otherwise used or moved in any way; where construction traffic over identified burrows is unavoidable, covering burrows during daytime operations with 1-inch plywood or steel plates to avoid collapsing burrow; restoration of all temporarily affected areas within suitable habitat; and additional restoration of degraded areas within the SCE right-of-way as compensation for permanent impacts to suitable habitat, such that there is no net loss of habitat value for SKR, as agreed upon by USFWS.</p>
APM BIO-12	<p>Los Angeles Pocket Mouse; Palm Springs Pocket Mouse. SCE would develop construction minimization measures and habitat conservation measures, as necessary through MSHCP participation, or, in the absence of such participation, in consultation with USFWS and CDFW. Habitat mitigation measures would be a combination of revegetation of temporarily impacted areas (see APM-BIO-1) and restoration of degraded areas as necessary to conserve the equivalent of 90 percent of the long-term conservation value habitat for LAPM, as determined by the RCA and/or USFWS and CDFW.</p>

The project route traverses lands within two different Multiple Species Habitat Conservation Plans (MSHCPs); Morongo Tribal land (reservation) and portions of San Bernardino County that are not within either MSHCP area; and BLM land within the Coachella Valley MSHCP (CV-MSHCP) area, but not covered by USFWS and CDFW take authorization for the CV-MSHCP. SCE intends to participate in both MSHCPs as a Participating Special Entity (PSE) but the PSE application process is not yet complete. This analysis indicates whether each impact would occur in each of the jurisdictional areas. Where mitigation is identified, the analysis indicates whether each measure is applicable with each jurisdictional area, based in part on whether MSHCP participation would mitigate the impact independently from mitigation measures identified herein.

Some of the Proposed Project's impacts to biological resources can be quantified in terms of acreage (e.g., acreage of habitat that would be affected by the project). Other impacts (e.g., adverse effects of noise and human disturbance to wildlife) cannot be directly quantified, but acreage is often the best available estimator of expected disturbance for comparison purposes. Wherever feasible, the analysis indicates acreage as the best available metric for each anticipated impact.

D.5.3.2 Impact Criteria

NEPA does not have specific significance criteria. However, NEPA regulations contain guidance regarding significance analysis. Specifically, consideration of “significance” involves an analysis of both context and intensity (Title 40 Code of Federal Regulations 1508.27). Using the following criteria for the purposes of analysis, the project or an alternative would impact wildlife resources if the project would:

- 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 CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- 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 ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

D.5.3.3 Impacts and Mitigation Measures

This section describes the Proposed Project’s expected direct and indirect impacts and identifies mitigation measures to avoid, minimize, reduce over time, or compensate for those impacts. The analysis considers all project components, including substation modifications, 220 kV transmission lines, 66 kV sub-transmission lines, 12 kV distribution lines, telecommunication facilities, and staging yards. In addition, this analysis assumes that the APMs are part of the Proposed Project. However, the analysis concludes that all APMs presented in Table D.5-1 were insufficiently detailed, and all are superseded by recommended mitigation measures identified in this analysis.

D.5.3.3.1 Summary of Impacts and Mitigation for Vegetation

Several of the impacts to vegetation resources, described in Section D.4.3.3, also apply to wildlife resources. This is especially true of habitat-related impacts (e.g., vegetation removal). In addition, several of the mitigation measures for vegetation resources identified in Section D.4.3.3 would also serve to mitigate wildlife resources impacts. These impacts and mitigation measures are listed below. Please refer to Section D.4.3.3 for the analysis and full text of each mitigation measure for vegetation.

Impact VEG-1: Land clearing for construction and future operations and maintenance would cause loss or degradation of vegetation and habitat, including sensitive habitats

Five mitigation measures are presented in Section D.4.3.3:

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])

- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)

Impact VEG-2: Project activities could cause indirect degradation of surrounding vegetation and habitat from dust, interrupted sand transport, interruption of surface water flows, or introduction and spread of invasive weeds

One mitigation measure is presented in Section D.4.3.3:

- VEG-2a (Prepare and implement an integrated weed management plan)

Impact VEG-3: Construction, operations, and maintenance activities would affect state or federally jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, or degradation of water quality

One mitigation measure is presented in Section D.4.3.3:

- VEG-3a (Minimize impact and ensure no net loss for jurisdictional waters and wetlands)

D.5.3.3.2 Impacts to Wildlife Resources

In addition to the impacts analysis and mitigation measures presented for vegetation in Section D.4.3.3, the following additional impacts and mitigation measures are identified for wildlife resources. Four types of impacts are considered in this section.

Impact WIL-1: Noise, lighting, vehicle traffic on access roads, and other project-related disturbance during construction, operations, and maintenance would affect wildlife including nesting birds, eggs, or chicks occupying surrounding vegetation and habitat, and could cause territory abandonment, behavioral changes, wildlife injury, or mortality

Direct and indirect impacts. Direct impacts are those impacts that result from the project and occur at the same time and place. Indirect impacts are caused by the project, but can occur later in time or farther removed in distance and are still reasonably foreseeable and related to the operation of the project. Examples of direct effects to wildlife are disturbance from noise and vibration, lighting, dust, and vehicle traffic; loss or degradation of habitat; destruction of burrows or nests; and mortality of individuals. Indirect effects include introduction and spread of invasive species that may compete with native species and cause habitat degradation or reduction of available food sources and increased predation due to certain habitat alterations (e.g., perch sites or “subsidies” for predators).

Construction, restoration, and O&M impacts. Vegetation removal would cause temporary or permanent loss of wildlife habitat along with the displacement and potential mortality of resident wildlife species that are poor dispersers, such as snakes, lizards, and small mammals. Construction could also result in the temporary degradation of adjacent habitat value due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. Soil disturbance, weed removal, site clearing, or site preparation during the restoration or O&M project phases also could cause temporary habitat degradation or wildlife disturbance.

Direct loss of small mammals, reptiles, and other less mobile species could occur during each phase of the Proposed Project. This loss would result primarily from the use of construction vehicles and the grading of laydown areas for tower or pole erection. Fossorial species (burrowing animals) may be harmed through the crushing of burrows, the loss of refugia, and direct mortality from construction activities.

Construction could also result in an increase in accidental road kills due to increased vehicle traffic along the construction corridor. Diurnally active reptiles and mammals are the most likely to be subject to mortality from construction vehicles. Other potential causes of wildlife mortality or injury include entrapment in trenches, pipes, or other supplies and equipment; drowning in stored water; or poisoning by ingestion or exposure to stored or spilled chemicals.

More mobile species such as birds and larger mammals are expected to disperse into adjacent habitat areas during the land clearing and grading phases associated with construction. They would be at increased risk of predation as they flush from cover during site clearing. After leaving their home territories, displaced animals may be unable to find suitable food or cover in new, unfamiliar areas. They may find themselves within the occupied territory of another individual of the same or similar species, leading to competition for resources. These adverse displacement effects would apply to common wildlife species and to special-status species.

Noise and vibration, dust, visual disturbance from increased human activity, and exhaust emissions from heavy equipment during construction could cause wildlife to avoid habitats adjacent to the construction sites. Construction could impact wildlife in adjacent habitats by interfering with breeding or foraging activities, altering movement patterns, or causing animals to temporarily avoid areas adjacent to the construction zone. Nocturnally active wildlife would tend to be affected less by construction than would diurnally active species. Wildlife species are most vulnerable to construction-related disturbances during their breeding seasons. Disturbances from construction could result in nest, roost, or territory abandonment and subsequent reproductive failure if these disturbances were to occur during an affected species' breeding season.

Wildlife “subsidies” such as food or water, could attract wildlife to the project area where they may be at increased risk of road strike or other injury or mortality. In addition, wildlife subsidies may attract predators such as ravens, coyotes, or feral dogs to the project area, where they may prey on other species, including special-status species. Pet animals, particularly dogs, may harass or injure wildlife in the project vicinity, or introduce illness such as canine distemper into native wildlife populations.

Vegetation removal and construction disturbance can also introduce or increase the spread of non-native plant species, causing wildlife habitat degradation.

Displacement or mortality of fully protected species or protected furbearers, regardless of other conservation status, may violate state and federal regulations. Birds, nests, and nestlings are generally protected under the Migratory Bird Treaty Act and California Fish and Game Code, regardless of other conservation designations. Thus, displacement or mortality of nesting birds (including eggs or nestlings), fully protected species, or protected furbearers, regardless of other conservation status designations, may violate state and federal regulations.

Nesting birds may be found throughout the Proposed Project area, including native vegetation, landscaped areas, open areas on the ground, existing transmission structures, and construction vehicles or equipment left inactive for short periods (e.g., a few days). Many project activities could remove nests or cause the displacement of breeding birds and the abandonment of active nests, either within work areas or in adjacent habitat (including transmission line structures). For some special-status bird species, the CV-MSHCP or WR-MSHCP may provide take authorization; this authorization would apply to the Proposed Project if SCE becomes a Participating Special Entity (PSE).

All future O&M would be similar to current O&M activities on the existing lines, including temporary impacts for road maintenance. These activities may include road or facilities site maintenance, transmission structure or conductor repairs, and similar activities. The Proposed Project's O&M effects to wildlife would be similar to existing conditions.

Mitigation Measures for Impact WIL-1: Noise, lighting, vehicle traffic on access roads, and other project-related disturbance during construction, operations, and maintenance would affect wildlife occupying surrounding vegetation and habitat, and could cause territory abandonment, behavioral changes, wildlife injury, or mortality

Under APM BIO-3, SCE committed to preparing and implementing a Nesting Bird Management Plan (NBMP) to include nest surveys prior to disturbance activities 14 days prior to construction disturbance; buffer areas around active nests, with buffer distance to be determined and adjusted by qualified biologists; nest monitoring; and nest deterrents (e.g., mooring balls). This analysis presents mitigation that supersedes APM BIO-3, in the form of Mitigation Measures WIL-1a (Conduct pre-construction biological resources surveys), WIL-1b (Ensure wildlife impact avoidance and minimization) and WIL-1c (Prepare and implement a Nesting Bird Management Plan).

Mitigation Measure WIL-1c (Prepare and implement a Nesting Bird Management Plan) requires preparation of a project-specific NBMP and specifies the contents and requirements of that NBMP. In order to ensure timely completion of the NBMP, CPUC and SCE convened a technical working group (TWG) of SCE, BLM, CPUC, CDFW, and USFWS biologists to prepare the NBMP concurrently with the CPUC and BLM's preparation of the EIR and EIS, respectively. The TWG held a series of meetings to outline the necessary NBMP contents, and then to review and revise several working draft versions of the NBMP. The TWG developed a final NBMP; see Appendix 14 (Nesting Bird Management Plan). SCE has not yet formally submitted the final NBMP to CDFW and USFWS as its proposed NBMP. The final NBMP is consistent with the requirements of Mitigation Measure WIL-1c (Prepare and implement a Nesting Bird Management Plan) and would reduce impacts to nesting birds.

The following mitigation measures presented in Section D.4 (Vegetation) also will help to reduce or offset disturbance and related impacts wildlife:

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)

Three additional mitigation measures are recommended below.

WIL-1a Conduct pre-construction biological resources surveys. SCE shall assign qualified biologists to perform pre-construction biological surveys at each project work area and access route, and in the area surrounding each work site or access route. Survey distances will vary, as appropriate, based on target species and as stipulated by project work plans and mitigation plans, but will be no less than 300 feet surrounding each work site and along any access route being created or improved. (Improvement is considered to be both 'drive and crush' and any road work that causes greater disturbance than light blading of previously existing roads.) For project access along existing routes or routes improved during an earlier phase of the project, the survey requirement will be 100 feet. An exception would be if a greater distance is stipulated in other applicable project work plans or mitigation measures. Where suitable nest

sites for raptors are present, the pre-construction surveys for raptor nests will extend to a 500-foot area surrounding the work area or road.

Pre-construction surveys shall be planned and implemented to identify locations of special-status plants and wildlife and nesting birds occurring at work areas, other portions of the ROW, or in adjacent buffer areas. Specific pre-construction survey methods or protocols will vary according to the resources which may be present at any given site, and according to season. At minimum, SCE shall complete pre-construction surveys 10 days prior to beginning work in any given area, and repeat the surveys if the work site remains inactive for a period of ten days or more. During nesting season, a qualified biologist shall complete nesting bird surveys no more than four days prior to beginning work at any given area, and repeat the surveys regularly so long as work continues at the site during the nesting season.

SCE shall submit resumes of all biologists performing pre-construction biological surveys to the CPUC and BLM for review and approval, in coordination with CDFW and USFWS. Results of pre-construction surveys shall be submitted to CPUC and BLM for review and approval and no work shall occur until the CPUC Environmental Monitor has validated the survey results and any applicable resource and work area boundary staking. Each pre-construction survey report shall include methods and results of the preconstruction survey, and a list of biological resources detected at each site during prior focused surveys or pre-construction surveys. The pre-construction survey report format and contents shall be subject to CPUC and BLM review and approval.

SCE also shall conduct pre-construction “sweeps” of each work site immediately prior to beginning construction or disturbance work, to identify any vulnerable wildlife that may have entered the site. Based on the results of pre-construction surveys and sweeps, SCE or its contractor shall observe buffer areas or other access or activity restrictions to minimize potential impacts to the resources. SCE shall provide documentation of the methods and results of all pre-construction surveys, and follow-up buffer areas or other avoidance measures that are implemented, to the CPUC and BLM.

Implementation locations: San Bernardino County (all); WR-MSHCP (all, regardless of SCE’s PSE status); CV-MSHCP (all, regardless of SCE’s PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

WIL-1b **Ensure wildlife impact avoidance and minimization.** SCE shall undertake the following measures during the construction, restoration, and O&M phases to avoid or minimize impacts to wildlife resources. Implementation of all measures shall be subject to review and approval by the CPUC and BLM in consultation with CDFW and USFWS. Impacts to nesting birds are addressed separately in Mitigation Measure WIL-1c (Prepare and implement a Nesting Bird Management Plan).

- **Minimize traffic impacts.** SCE will specify and enforce a maximum 15 mile per hour vehicle speed limit on access roads within the ROW and project vicinity. No project-related pedestrian or vehicle traffic will be permitted outside defined work site boundaries (as marked on the site according to Mitigation Measure VEG-1c (Minimize native vegetation and habitat loss)).
- **Minimize lighting impacts.** Night lighting, when in use, shall be designed, installed, and maintained to prevent side casting of light towards surrounding fish or wildlife habitat.

- **Avoid use of toxic substances.** Soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be non-toxic to wildlife and plants.
- **Minimize noise and vibration impacts.** To minimize disturbance to wildlife nesting or breeding activities in surrounding habitat, project-related helicopter use shall be avoided or managed to the extent feasible from February 1 to August 31. Unnecessary noise (e.g., blaring radios) shall be avoided.
- **Water.** Potable and non-potable water sources such as tanks, ponds, and pipes shall be covered or otherwise secured to prevent animals (including birds) from entering. Prevention methods may include storing all water within closed tanks, covering open storage ponds or tanks with 2 centimeter netting, or other means as applicable. Water applied to dirt roads and construction areas for dust abatement shall use the minimal amount needed to meet safety and air quality standards. Water sources (e.g., hydrants, tanks, etc.) shall be checked periodically by biological monitors to ensure they are not creating open water sources by leaking or consistently overfilling trucks.
- **Worker guidelines.** All trash and food-related waste shall be contained in vehicles or covered trash containers and removed from the site regularly. Workers shall not feed wildlife or bring pets to the project site. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons.
- **Wildlife netting or exclusion fencing.** SCE may install temporary or permanent netting or fencing around equipment, work areas, or project facilities to prevent wildlife exposure to hazards such as toxic materials or vehicle strikes, or prevent birds from nesting on equipment or facilities. Bird deterrent netting will be maintained free of holes and will be deployed and secured on the equipment in a manner that, insofar as possible, prevents wildlife from becoming trapped inside the netted area or within the excess netting. The biological monitor will inspect netting (if installed) twice daily, at the beginning and close of each work day, with the exception of netting installed in established material yards, which will be inspected at least once daily. The biological monitor will inspect exclusion fence (if installed) weekly and will inform SCE of any needed repairs; SCE shall promptly repair any damage to the exclusion fencing.
- **Wildlife entrapment.** Project-related excavations shall be secured to prevent wildlife entry and entrapment. Holes and trenches shall be backfilled, securely covered, or fenced. Excavations that cannot be fully secured shall incorporate appropriate wildlife ramp(s) at a slope of no more than a 3:1 ratio, or other means to allow trapped animals to escape. Biological monitors shall provide guidance to construction crews to ensure that wildlife ramps or other means are sufficient to allow trapped animals to escape. At the end of each work day, a biological monitor shall ensure that excavations have been secured or provided with appropriate means for wildlife escape.

All pipes or other construction materials or supplies will be covered or capped in storage or laydown areas. No pipes or tubing will be left open either temporarily or permanently, except during use or installation. Any construction pipe, culvert, or other hollow materials will be inspected for wildlife before it is moved, buried, or capped.

Dead animals. Dead animals of non-special-status species found on unpaved project roads, work areas, or the ROW shall be reported to the appropriate local animal control agency within 24 hours. A biological monitor shall safely move the carcass out of the road or work area as needed. Dead animals of special-status species found on unpaved project roads, work

areas, or the ROW shall be reported to CDFW within one work day and the carcass handled as directed by CDFW.

Injured wildlife. SCE shall create and implement guidelines for dealing with injured or entrapped wildlife found on or near project roads, work areas, or the ROW, and provide these guidelines to all biological monitors. If an animal is entrapped, a qualified biological monitor shall free the animal if feasible, or work with construction crews to free the animal, in compliance with applicable safety regulations and project requirements. If biological monitors cannot free the animal or the animal is too large or dangerous for monitors to handle, SCE shall contact and work with animal control, CDFW, or other qualified party to obtain assistance for the animal as soon as possible.

SCE shall ensure that one or more qualified biological monitors receive training in the safe and proper handling and transport of injured wildlife and are provided with the appropriate equipment. These trained and equipped monitors shall be available to capture and transport injured wildlife to a local wildlife rehabilitator or veterinarian as needed. If the injured animal is too large or dangerous for monitors to handle, or a trained and equipped monitor is not available, SCE shall contact and work with a local wildlife rehabilitator, animal control, CDFW, or other qualified party to obtain assistance for the animal as soon as possible. SCE shall bear the costs of veterinary treatment and rehabilitation for any wildlife injured by project-related activities and any injured wildlife found on or near project roads, work areas, or the ROW, unless the injuries are clearly not project-related, as determined by a qualified biologist. Additionally, any entrapped or injured special-status species found on project roads, work areas, or the ROW shall be reported to the appropriate resource agency within one work day.

Rattlesnake guidelines. Prior to the start of construction, SCE shall prepare and implement guidelines for dealing with rattlesnakes found in or near project work areas and access roads and provide these guidelines to all biological monitors, safety staff, and other personnel. Killing or harming rattlesnakes or other wildlife is not authorized. If SCE determines that it is appropriate for biological monitors or other project personnel to handle rattlesnakes, SCE shall ensure that an adequate number of qualified individuals are trained in the safe and proper handling of rattlesnakes and provided with the appropriate safety and snake handling equipment, including a secure storage container for transporting snakes. These trained and equipped individuals shall be available to remove rattlesnakes found in or near project work areas and access roads as needed and relocate them to appropriate nearby habitat. Other project personnel shall not harass, or handle rattlesnakes, except as required to maintain immediate safety or in accordance with the guidelines developed by SCE. Handling and relocation of rattlesnakes shall be documented, and the species of rattlesnake determined whenever possible. If a special-status rattlesnake is relocated, documentation shall be submitted to CPUC, BLM, and CDFW.

Alternately, SCE may determine that project personnel shall not handle or approach rattlesnakes. If so, the guidelines shall specify an alternate course of action for rattlesnake encounters, such as avoiding work activity near the snake and monitoring its location and activity until it leaves the area.

Implementation locations: San Bernardino County (all); WR-MSHCP (all, regardless of SCE's PSE status); CV-MSHCP (all, regardless of SCE's PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

WIL-1c Prepare and implement a Nesting Bird Management Plan. [Supersedes APM BIO-3] SCE shall prepare a Nesting Bird Management Plan (NBMP) in coordination with CPUC, BLM, CDFW, and USFWS. The NBMP shall describe methods to minimize potential project effects to nesting birds, and avoid any potential for unauthorized take. Project-related disturbance including construction and pre-construction activities shall not proceed within 300 feet of active nests of common bird species or 500 feet of active nests of raptors or special-status bird species (except for golden eagle as described in Mitigation Measure WIL-2f) until approval of the NBMP by CPUC and BLM in consultation with CDFW and USFWS.

NBMP Content. The NBMP shall include: (1) definitions of default nest avoidance buffers for each species or group of species, depending on characteristics and conservation status for each species; (2) a notification procedure for buffer distance reductions should they become necessary; (4) a rigorous monitoring protocol, including qualifications of monitors, monitoring schedule, and field methods, to ensure that any project-related effects to nesting birds will be minimized; and (5) a protocol for documenting and reporting any inadvertent contact or effects to birds or nests.

The paragraphs below describe the NBMP requirements in further detail.

Background. The NBMP shall include the following:

- A summary of applicable state and federal laws and regulations, including definition of what constitutes a nest or active nest under state and federal law.
- A procedure for amendment of the NBMP, should there be changes in applicable state or federal regulations.
- A list of bird species potentially nesting on or near the ROW or other work areas, indicating approximate nesting seasons, nesting habitat, typical nest locations (e.g., ground, vegetation, structures, etc.), tolerance to disturbance (if known) and any conservation status for each species. This section will also note any species that do not require avoidance measures (e.g., rock pigeons).
- A list of the types of project activities (construction, operations, and maintenance) that may occur during nesting season, with a short description of the noise and physical disturbance resulting from each activity.
- Clearing of any vegetation, site preparation in open or barren areas, or other project-related activities that may adversely affect breeding birds shall be scheduled outside the nesting season, as feasible.

Pre-construction nest surveys. Pre-construction nest surveys will be conducted prior to any construction activities scheduled during the breeding period. For this project, the breeding period will be defined as January 1 through August 31. The NBMP shall describe the proposed field methods, survey timing, and qualifications of field biologists. Field biologist qualifications will be subject to review by CPUC and BLM. The avian biologists conducting the surveys shall be experienced bird surveyors and familiar with standard nest-locating techniques such as those described in Martin and Guepel (1993). Nest surveys will focus on visual searches for nest locations and observations of bird activities and movement to detect nesting activity (e.g., carrying nest materials or food, territorial displays, courtship behavior). Surveys shall be conducted in accordance with the following guidelines.

- Surveys shall cover all potential nesting habitat within the ROW or other work areas and within 500 feet of these areas for raptors and 300 feet for non-raptors.
- Pre-construction surveys shall be conducted for each work area, no longer than 10 days prior to the start of construction activity. On the first day of construction at any given site, a qualified Avian Biologist will perform a pre-construction “sweep” to identify any bird nests or other resources that may have appeared since the 10-day survey.
- SCE shall provide the CPUC and BLM a report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity of the surveyor(s); a list of species observed; and electronic data identifying nest locations and the boundaries of buffer zones. The electronic data set will be updated following each pre-construction nest survey throughout the nesting season. The format and contents of this report will be described in the draft NBMP and will be subject to review and approval by CPUC and BLM.

Nest Buffers and Acceptable Activities

The NBMP shall specify measures to delineate buffers on the work site, to consist of clearly visible marking and signage. Buffer locations shall be communicated to the construction contractor, and shall remain in effect until formally discontinued (when each nest is no longer active). In addition, the NBMP shall specify measures to ensure the buffers are observed, including a direct communication and decision protocol to stop work within buffer areas. In some cases, active nests may be found while work is underway. Therefore, the NBMP shall include a protocol for stopping ongoing work within the buffer area, securing the work site, and removing personnel and equipment from the buffer.

The NBMP shall describe proposed measures to avoid take or adverse effects to nests, such as buffer distances from active nests. These measures shall be based on the specific nature of the bird species and conservation status, and other pertinent factors.

The NBMP will identify bird species (or groups of species) that are relatively tolerant or intolerant of human activities and specify smaller or larger buffer distances as appropriate for each species. If no information is available to specify a buffer distance for a species, then the NBMP shall specify 300 feet as a standard buffer distance, and 500 feet for raptors and special-status species. Nest management for listed threatened or endangered species will be prescribed in a USFWS Biological Opinion, CDFW Incidental Take Permit, or both. All applicable avoidance measures, including buffer distances, must be continued until nest monitoring (below) confirms that the nestlings have fledged and dispersed, or the nest is no longer active.

For each special-status species potentially nesting within or near project work areas, the NBMP shall specify applicable buffers and any additional nest protection measures, specialty monitoring, or restrictions on work activities, if needed.

The NBMP shall identify acceptable work activities within nest buffers (e.g., pedestrian access for inspection or BMP repair) including conditions and restrictions, and any monitoring required. The NBMP shall include pictorial representation showing buffer distances for ground buffers, vertical helicopter buffers, and horizontal helicopter buffers for nests near the ground and nests in towers.

Nest Buffer Modification or Reduction

At times, SCE or its contractor may propose buffer distances different from those approved in the NBMP. Buffer adjustments shall be reviewed and recommended by a qualified avian biologist who has been approved by CPUC and BLM in consultation with the CDFW and USFWS. The NBMP shall provide a procedure and timing requirements for notifying CPUC, BLM, CDFW, and USFWS of any planned adjustments to nest buffers. Separate and distinct procedures will be provided for special-status birds. The NBMP will list the information to be included in buffer reduction notifications in a standardized format.

Nest deterrents. The NBMP shall describe any proposed measures or deterrents to prevent or reduce bird nesting activity on project equipment or facilities, such as buoys, visual or auditory hazing devices, bird repellents, securing of materials, and netting of materials, vehicles, and equipment. It shall also include timing for installation of nest deterrents and field confirmation to prevent effects to any active nest; guidance for the contractor to install, maintain, and remove nest deterrents according to product specifications; and periodic monitoring of nest deterrents to ensure proper installation and functioning and prevent injury or entrapment of birds or other animals. In the event that an active nest is located on project facilities, materials or equipment, SCE will avoid disturbance or use of the facilities, materials or equipment (e.g., by red-tag) until the nest is no longer active.

Communication. The NBMP shall specify the responsibilities of construction monitors in regards to nests and nest issues, and specify a direct communication protocol to ensure that nest information and potential adverse impacts to nesting birds can be promptly communicated from nest monitors to construction monitors, so that any needed actions can be taken immediately.

The NBMP shall specify a procedure to be implemented following accidental disturbance of nests, including wildlife rehabilitation options. It also shall describe any proposed measures, and applicable circumstances, to prevent take of precocial young of ground-nesting birds such as killdeer or quail. For example, chick fences may be used to prevent them from entering work areas and access roads. Finally, the NBMP will specify a procedure for removal of inactive nests, including verification that the nest is inactive and a notification/approval process.

Monitoring. SCE shall be responsible for monitoring the implementation, conformance, and efficacy of the avoidance measures (above). The NBMP shall include specific monitoring measures to track any active bird nest within or adjacent to project work areas, bird nesting activity, project-related disturbance, and outcome of each nest. For nests with reduced buffers, SCE shall monitor each nest until nestlings have fledged and dispersed or until the nest becomes inactive. Nests with default buffers do not require further monitoring once construction work is completed in the area. New nests discovered after work completion in an area would not require monitoring. In addition, monitoring shall include pre-construction surveys, daily sweeps of work areas and equipment, and any special monitoring requirements for particular activities (tree trimming, vegetation removal, etc.) or particular species (noise monitoring, etc.). Nest monitoring shall continue throughout the breeding season during each year of the project's construction activities.

Reporting. Throughout the construction phase of the project, nest locations, project activities in the vicinity of nests (including helicopter traces), and any adjustments to buffer areas shall be updated and available to CPUC monitors on a daily basis. All buffer reduction notifications

and prompt notifications of nest-related non-compliance and corrective actions will be made via email to CPUC monitors. The draft NBMP shall include a proposed format for daily and weekly reporting (e.g., spreadsheet available online, tracking each nest). In addition, the NBMP shall specify the format and content of nest data to be provided in regular monitoring and compliance reports. At the end of each year's nest season, SCE will submit an annual NBMP report to the CPUC, BLM, CDFW, and USFWS. Specific contents and format of the annual report will be reviewed and approved by the CPUC and BLM in consultation with CDFW and USFWS.

Implementation locations: San Bernardino County (all); WR-MSHCP (all, regardless of SCE's PSE status); CV-MSHCP (all, regardless of SCE's PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

Impact WIL-2: Construction, restoration, operations, and maintenance activities could cause direct or indirect loss of listed and special-status wildlife and direct or indirect effects to habitat for listed and special-status wildlife

The Proposed Project's expected direct and indirect impacts to special-status wildlife during construction, restoration, and O&M phases would be similar to the impacts described in Impact WIL-1.

Listed Wildlife

Four federally or state-listed threatened or endangered animal species were documented within the Proposed Project study area during surveys: desert tortoise, least Bell's vireo, Stephens' kangaroo rat, and Swainson's hawk. Four additional listed species have a moderate or high potential for occurrence: western yellow-billed cuckoo, southwestern willow flycatcher, little willow flycatcher, and coastal California gnatcatcher. Note that Swainson's hawk, little willow flycatcher, and western yellow-billed cuckoo would occur in the Proposed Project area only during migratory seasons. The Proposed Project passes through designated critical habitat for the coastal California gnatcatcher, and designated critical habitat for the southwestern willow flycatcher is located within 200 feet of the Proposed Project area. Listed species with a low potential to occur are Casey's June beetle, mountain yellow-legged frog, Coachella Valley fringe-toed lizard, and bald eagle.

Take of listed species may result from Proposed Project activities, as detailed in the following paragraphs. If SCE obtains PSE status under the MSHCPs, take of covered species within the WR-MSHCP or CV-MSHCP may be authorized within the two MSHCP areas under existing state and federal authorizations. Regardless of MSHCP participation, the Proposed Project may affect listed species outside the MSHCP areas or on BLM land within the CV-MSHCP. ESA Section 7 Consultation would be required for the Proposed Project's potential take of federally listed species, and CESA take authorization would be required for any take of state-listed species. If SCE does not obtain PSE status, these consultation or permitting requirements would also apply within the MSHCP areas.

The Proposed Project's impacts to listed wildlife species would be mitigated in part through mitigation measures identified in Section D.4 (Vegetation) and under Impact WIL-1, as follows:

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)

- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)
- WIL-1c (Prepare and implement a Nesting Bird Management Plan)

In addition, the following APMs are proposed by SCE, (Table D.5-1):

- APM BIO-5 Desert Tortoise
- APM BIO-6 Least Bell's Vireo, Southwestern Willow Flycatcher, And Western Yellow-Billed Cuckoo
- APM BIO-10 Coastal California Gnatcatcher and Designated Critical Habitat
- APM BIO-11 Stephens' Kangaroo Rat

However, these APMs are not sufficiently detailed to effectively reduce impacts and protect wildlife resources. As a result, Mitigation Measures WIL-2a through WIL-2e are recommended.

The following paragraphs address each listed species, describing species-specific impacts. Mitigation Measures WIL-2a through WIL-2e are recommended to mitigate the Proposed Project's impacts to listed species. (These two measures are set forth under "Mitigation Measures for Impact WIL-2" after the discussion of Impact WIL-2.)

- WIL-2a (Conduct desert tortoise surveys, monitoring, and avoidance)
- WIL-2b (Prepare and implement raven monitoring, management, and control plan)
- WIL-2c (Conduct surveys and avoidance for threatened or endangered riparian birds)
- WIL-2d (Conduct surveys and avoidance for Stephens' kangaroo rat)
- WIL-2e (Conduct surveys and avoidance for coastal California gnatcatcher)

State and federal permitting or consultation, and MSHCP participation (if SCE obtains PSE status) may result in additional measures to mitigate the Proposed Project's impacts to listed species.

Desert tortoise. Desert tortoise is federally and state-listed as threatened and is a covered species under the CV-MSHCP. Desert tortoise sign, burrows, and live tortoise were observed within and adjacent to the existing WOD corridor and within access road areas on reservation lands and within the CV-MSHCP area. Although potentially suitable habitat for desert tortoise is extensive, the distribution of the individuals observed was uneven, and indicated that the species may be more abundant in some areas and scarce or absent in others. The project could cause injury or mortality to desert tortoise during surface disturbing activities. Other impacts may include destruction of burrows and alteration of behavior and seasonal activities. Construction vehicles and routine operations and maintenance operations could result in injury or death to desert tortoises through vehicle collisions. This is especially true with juvenile desert tortoises, which are difficult to see due to their small size and profile. In addition, desert tortoises seeking shade under parked vehicles or equipment could be crushed when vehicles and equipment are moved.

Newly constructed transmission towers may provide artificial perches and nest sites for ravens, which prey on young desert tortoises. The Proposed Project would result in a net decrease in the overall number of transmission structures in desert tortoise habitat, but most of the new towers would be steel lattice, whereas many of the existing structures to be removed are wooden "H-frame" design. Steel lattice towers provide more horizontal and diagonal surfaces that can support raven nests. Due to these design differences, the Proposed Project would result in a net increase of approximately 100 lattice steel towers, increasing the availability of suitable raven nest sites. The portion of the Proposed Project route within desert tortoise habitat is near the I-10 Freeway, where multiple other human structures such as billboards, road signs, buildings, and inactive wind turbines are present. Suitable nest sites may not limit raven breeding opportunities in the eastern Proposed Project area, but the project may have some potential to increase raven numbers in desert tortoise habitat. Therefore, Mitigation Measure WIL-2b, (Prepare and

implement raven monitoring, management, and control plan), is recommended to minimize raven predation on desert tortoises.

The project could also provide subsidies to ravens in the form of food sources from trash, water, and nesting materials from cleared brush and debris. This effect could indirectly lead to an increase in predation on the desert tortoise and other species by ravens.

Construction will directly impact suitable habitat for desert tortoise by permanent removal of habitat and temporary loss or degradation of habitat. Construction activities also could degrade desert tortoise habitat by compacting the soil, causing reduction of food and cover vegetation, promote loss of soil and nutrients, reduced water absorption, and increased difficulty of digging burrows. Construction activities can also introduce or increase the spread of non-native plant species, further degrading tortoise habitat. Desert tortoise habitat within the project area is primarily desert scrub and alluvial scrub on Segment 6 and the eastern end of Segment 5. The total estimated permanent and temporary impacts to these habitats on these segments are 95.3 and 978.8 acres respectively (see Table D.5-2).

Impacts to desert tortoise and their habitat could occur on reservation lands, BLM lands, and the area included within the CV-MSHCP. Take of desert tortoise habitat and incidental take of individual desert tortoises would be covered within the CV-MSHCP area if SCE becomes a PSE and implements the requirements of the CV-MSHCP (USFWS, 2008). In addition to the mitigation measures listed above, Mitigation Measure WIL-2a (Conduct desert tortoise surveys, monitoring, and avoidance) will ensure that project impacts to desert tortoise are mitigated adequately.

Table D.5-2. Alluvial Scrub and Desert Scrub Maximum Potential Impacts on Segments 5 and 6

Vegetation Community	Permanent Impacts (acres)			Temporary Impacts (acres)		
	Segment 5	Segment 6	Total	Segment 5	Segment 6	Total
Alluvial Scrub	5.2	2.0	7.2	62.3	17.2	79.5
Desert Scrub	26.4	61.7	88.1	401.1	498.2	899.3
Total Potential Impact	31.6	63.7	95.3	463.4	515.4	978.8

Listed riparian birds. Least Bell’s vireo is federally and state-listed as endangered and is covered under the WR-MSHCP and CV-MSHCP. It occurs in the riparian woodland habitat along San Timoteo Creek and the riparian habitat to the east. These areas are within the WR-MSHCP. Least Bell’s vireo is unlikely to occur in the project area within San Bernardino County or the CV-MSHCP area. Take of least Bell’s vireo breeding and foraging habitat and incidental take of vireo nests, eggs, and nestlings would be covered within the WR-MSHCP area if SCE becomes a PSE and implements the requirements of the WR-MSHCP (USFWS, 2004).

Southwestern willow flycatcher is federally and state-listed as endangered and is covered under the WR-MSHCP and CV-MSHCP. Designated critical habitat is found within 200 feet of the project area in San Timoteo Canyon at the east end of Segment 3, and within approximately 1,000 feet of the project area in the Santa Ana River west of the westernmost end of Segment 2. No southwestern willow flycatchers were observed during project surveys, but the species has a moderate potential to forage and a low potential to nest in portions of the project area within the WR-MSHCP, particularly in the riparian habitat along San Timoteo Canyon. It has a low potential to forage and is unlikely to nest in the project area within San Bernardino County; critical habitat in the Santa Ana River is separated from the project area in Segment 2 by a housing development; see Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7). Southwestern willow flycatcher is unlikely to forage or nest in the project area

within the CV-MSHCP. Take of southwestern willow flycatcher foraging habitat, but not take of breeding territories, would be covered within the WR-MSHCP area if SCE becomes a PSE and implements the requirements of the WR-MSHCP (USFWS, 2004).

Western yellow-billed cuckoo is federally listed threatened, state-listed as endangered, and a covered species under the WR-MSHCP. No western yellow-billed cuckoos were observed during project surveys, but the species was observed near El Casco Substation during surveys for the substation construction project (Aspen, 2007). It has a high potential to forage and a low potential to nest in portions of the project area within the WR-MSHCP. It has a low potential to forage and is unlikely to nest in the remainder of the project area. Take of western yellow-billed cuckoo foraging habitat, but not take of breeding territories, would be covered within the WR-MSHCP area if SCE becomes a PSE and implements the requirements of the WR-MSHCP (USFWS, 2004). Potential impacts to western yellow-billed cuckoo habitat would be largely, if not completely, confined to the WR-MSHCP area.

Little willow flycatcher is a state-listed endangered species. It was not observed during project surveys, but may occur in the project area during migration. It is unlikely to nest anywhere in the project area. Little willow flycatcher is not a covered species under the WR-MSHCP or the CV-MSHCP and potential impacts to the species would not be mitigated by participation in the WR-MSHCP or CV-MSHCP. Its habitat requirements are similar to other riparian birds, and project impacts to this riparian habitat would be mitigated through measures described herein, or through MSHCP participation. Potential impacts to the species or its habitat may require incidental take authorization from CDFW.

Other listed riparian birds may be present in the project area during construction. Adult birds will generally flee from disturbance, but construction activities could result in damage to or loss of nests and injury or mortality to eggs and nestlings during surface disturbing activities. Other impacts may include alteration and disruption of foraging and breeding behavior. Construction would directly impact suitable habitat for listed riparian birds by temporary or permanent removal of habitat. Construction activities also could degrade habitat through soil compaction and the introduction and spread of non-native plant species.

As shown in Table D.5-3, potential permanent and temporary impacts to riparian habitat throughout the project area are 2.5 and 22.2 acres, respectively, with most of these impacts occurring in Segment 4. Impacts to listed riparian birds would be mitigated in part through the mitigation measures listed above. In addition to these measures, Mitigation Measure WIL-2c (Conduct surveys and avoidance for threatened or endangered riparian birds) will ensure that project impacts to the above listed riparian birds are mitigated adequately by including species specific details and performance criteria.

Stephens' kangaroo rat. Stephens' kangaroo rat (SKR) is a federally listed endangered and state-listed threatened species and is covered under the WR-MSHCP. During surveys for the project, one SKR was found within the vicinity of an access road in Segment 3 (one capture in 2012 and no captures in 2013 in the same area); this occurrence is within San Bernardino County. Potential habitat for SKR is limited to grassland and grassland/scrub ecotone in Segments 1, 2, 3, and 4. Potential habitat in Segments 1 and 2, and the west end of Segment 3 is within San Bernardino County. Potential habitat on the east end of Segment 3 and Segment 4 is within the WR-MSHCP area.

SKR may be present in the project area during construction, and construction activities could result in injury or mortality to SKR during surface disturbing activities. Other impacts may include destruction of burrows and alteration of foraging and breeding behavior. Use of construction vehicles and routine operations and maintenance operations could result in injury or death to SKR through vehicle collisions or crushing of burrows.

Construction would directly impact suitable, and possibly occupied, habitat for SKR. There are 528.2 acres of potentially suitable SKR habitat occur in the Proposed Project study area, of which up to 29.7 acres would be permanently affected and 187.9 acres temporarily affected (Table D.5-4).

Take of SKR habitat and incidental take of individual SKR would be covered within the WR-MSHCP area if SCE becomes a PSE and implements the requirements of the WR-MSHCP (USFWS, 2004). Impacts to SKR would be mitigated in part through the mitigation measures listed above. In addition to these measures, Mitigation Measure WIL-2d (Conduct surveys and avoidance for Stephens' kangaroo rat) will ensure that project impacts to SKR are reduced to less than significant.

Table D.5-3. Riparian Woodland Maximum Potential Impacts

Segment	Permanent Impacts (acres)	Temporary Impacts (acres)
1	—	0.6
2	—	0.8
3	0.0*	2.6
4	2.5	16.6
5	—	1.7
6	—	—
Total Potential Impact	2.5	22.2

*Impact less than 0.05 and not included in table due to rounding error.

Table D.5-4. Stephens' Kangaroo Rat Habitat Maximum Potential Impacts

Vegetation Community	Acreage of Potential Habitat within the Project Study Area	Permanent Impacts (acres)	Temporary Impacts (acres)
Coastal Sage Scrub ¹	134.6	6.7	52.9
Grassland/Forbland	393.6	23.0	135.0
Total Potential Impact	528.2	29.7	187.9

1 - Excluding black sage scrub.

Coastal California gnatcatcher. The coastal California gnatcatcher (CAGN) is a federally listed threatened species and covered under the WR-MSHCP. Habitat for CAGN is mainly coastal sage scrub, which is found on the western portion of the project route in San Bernardino County, the WR-MSHCP area, and the western portion of the reservation. Designated critical habitat for CAGN is found on the west end of the project in San Bernardino County, along approximately 3.5 miles of Segment 2. CAGN was not detected in the Proposed Project study area during focused surveys conducted in 2012 and 2013. However, there is a moderate potential that it may occupy habitat in Segments 3 and 4, and a high potential in Segment 2.

CAGN may be present in the project area during construction. Adult birds will generally flee from disturbance, but construction activities could result in damage to or loss of nests and injury or mortality to eggs and nestlings during surface disturbing activities. Other impacts may include alteration and disruption of foraging and breeding behavior.

Suitable CAGN habitat, including designated critical habitat, would be impacted by the project, including permanent and temporary habitat loss and temporary disturbance to surrounding habitat. Construction activities also could degrade habitat through soil compaction and the introduction and spread of non-native plant species. The project would permanently affect up to 79.3 acres of coastal sage scrub and temporarily remove up to 453.5 additional acres (see Table D.4-4 in Section D.4). Within designated critical habitat, the Proposed Project would permanently impact up to 28.3 acres, of which 11.1 acres are potentially suitable coastal sage scrub habitat. In addition, the project would temporarily impact up to 187.1 acres of designated critical habitat, of which approximately 72.8 acres is potentially suitable coastal sage scrub habitat (Table D.5-5).

Take of CAGN breeding and foraging habitat and incidental take of gnatcatcher nests, eggs, and nestlings would be covered within the WR-MSHCP area if SCE becomes a PSE and implements the requirements of the WR-MSHCP (USFWS, 2004). Potential impacts to CAGN and its habitat, including designated critical habitat, in San Bernardino County requires Section 7 Consultation and may require incidental take authorization. Potential impacts within the reservation require Section 7 Consultation and may require incidental take authorization. Impacts to CAGN would be mitigated in part through the mitigation measures listed above. In addition to these measures, Mitigation Measure WIL-2e (Conduct surveys and avoidance for coastal California gnatcatcher) will ensure that project impacts to CAGN are reduced to less than significant.

Table D.5-5. Coastal California Gnatcatcher Critical Habitat Maximum Potential Impacts

Vegetation Community	Acreage within the Project Study Area	Permanent Impacts (acres)	Temporary Impacts (acres)
Coastal Sage Scrub	220.4	11.1	72.8
Grassland/Forbland	312.1	13.8	88.6
Riparian	9.6	0.1	3.0
Developed/Disturbed	81.1	3.3	22.7
Total Critical Habitat	623.2	28.3	187.1

Other listed species. Four listed species have a low potential to occur in the project area: Casey’s June beetle, Sierra Madre yellow-legged frog, Coachella Valley fringe-toed lizard, and bald eagle.

Casey’s June beetle is federally listed endangered species. Habitat for larvae is alluvial sands where they live underground and feed on plant roots and other organic material. Adults emerge in the spring and are active for two to four weeks. This species’ currently known distribution is limited to the alluvial floodplain in Palm Canyon, at the south end of Palm Springs. There is potentially suitable habitat for Casey’s June beetle in Segment 6, but the species was not detected during project surveys, and the project area is outside the species’ current known range. No impacts to Casey’s June beetle are expected.

Sierra Madre (mountain) yellow-legged frog is a federally and state-listed endangered species and a covered species under the WR-MSHCP. Habitat for this species is permanent water in ponds, lakes, and streams, at moderate to high elevations in the San Gabriel, San Jacinto, and San Bernardino Mountains. Sierra Madre yellow-legged frog has been reported in habitat upstream of the project area in the San Gorgonio River (Segment 5) and Whitewater River (Segment 6). There is also an unconfirmed, and likely erroneous, report of this species at gravel quarry ponds at Robertson’s Plant 66 (Segment 5). The U.S. Geological Survey has done exhaustive surveys to locate any remaining populations of this species and none have been reported from the project area. There is no suitable habitat in the project area for Sierra Madre yellow-legged frog, and no impacts are expected.

Coachella Valley fringe-toed lizard is a federally listed threatened and state-listed endangered species, and a covered species under the CV-MSHCP. Habitat for this species is fine, loose, aeolian sand in sparse desert scrub vegetation. There is potentially suitable habitat for Coachella Valley fringe-toed lizard in Segment 6 east of the Whitewater River. The species was not detected during project surveys and the project area may be outside its current range. No project effects to Coachella Valley fringe-toed lizard are expected.

Bald eagle is protected under the federal Bald and Golden Eagle Protection Act and is a state-listed endangered species and a California fully protected species; it is a covered species under the WR-MSHCP. Bald eagles generally forage in areas with lakes or reservoirs with fish or waterfowl for prey. The bald eagle

nests in large trees in secluded areas with a permanent water source and is unlikely to nest anywhere within the vicinity of the project area. This species was not observed during project surveys, but there is suitable wintering habitat (artificial lakes) near Segment 3, and it has been reported as an occasional winter visitor there.

There is a low potential for any of these other listed species to be present in the project area during construction, but if present, construction activities could result in injury or mortality to Casey's June beetle, Sierra Madre (mountain) yellow-legged frog, and Coachella Valley fringe-toed lizard during surface disturbing activities. Vehicles could cause injury or death to these species through collisions or crushing. Other impacts may include alteration of foraging and breeding behavior.

Adult bald eagles will generally flee from disturbance, and it is unlikely that any bald eagle nests would occur in the vicinity of the project area. Foraging habitat for bald eagle is unlikely to be affected by the project. Potential project impacts to this species include alteration and disruption of foraging behavior. These impacts (if any) would be negligible, and no additional mitigation is recommended.

Potential habitat for Casey's June beetle and Coachella Valley fringe-toed lizard would be impacted by permanent removal of habitat and temporary loss or degradation of habitat. Construction activities also could degrade habitat through soil compaction and the introduction and spread of non-native plants. Take of habitat and incidental take of animals would be covered within the CV-MSHCP area for Coachella Valley fringe-toed lizard if SCE becomes a PSE and implements the requirements of the CV-MSHCP and WR-MSHCP (USFWS, 2004).

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would serve to minimize or avoid take of any of these species, should they occur within the project area.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)

Other critical habitat. Designated critical habitat for two additional listed species, the San Bernardino kangaroo rat (*Dipodomys merriami parvus*) and Santa Ana sucker (*Catostomus santaanae*), is located in the Santa Ana River and surrounding wash habitat to the west and north and outside of the Proposed Project study area in Segments 1 and 2, in San Bernardino County. It is over 1,000 feet from the Mountain View 1 staging yard and San Bernardino Substation at the north end of Segment 1. This critical habitat is separated from the project area by industrial development; see Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7). There is no suitable habitat or designated critical habitat for either species within the project area. Designated critical habitat for southwestern willow flycatcher (discussed above) and Santa Ana sucker is located along the Santa Ana River approximately 1,000 feet west of the westernmost end of Segment 2. This critical habitat is separated from the project area by a housing development; see Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7).

These critical habitat areas appear along drainages, which provide the primary constituent elements for these species. In all cases, these habitats are separated from the Proposed Project by intervening land uses that provide some buffer between the habitat areas and the Proposed Project, and no direct impacts are anticipated. Indirect impacts could occur if dust from construction activities or sediment or pollutants

from the project were carried or washed from the project area into the Santa Ana River drainage and caused degradation of habitat.

The following mitigation measures identified in Section D.4 and under Impact WIL-1 and additional mitigation measures protecting air quality and surface waters would minimize the potential for any impacts to the drainages in these critical habitat areas.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1b (Ensure wildlife impact avoidance and minimization)

Other Special-status Wildlife

Forty-five non-listed special-status wildlife species were observed during surveys and 26 additional special-status animals have a moderate or high potential for occurrence within the Proposed Project study area, as described in Table Ap.7-2 (in Appendix 7).

The Proposed Project's impacts to non-listed special-status wildlife species would be mitigated in part through mitigation measures identified in Section D.4 (Vegetation) and under Impact WIL-1, as follows:

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)
- WIL-1c (Prepare and implement a Nesting Bird Management Plan)

While SCE has proposed APMs to protect burrowing owl and the pocket mouse, these measures have been found to be insufficiently detailed, and they are superseded by Mitigation Measures recommended in this section.

The following paragraphs address each special-status species, describing species-specific impacts. The following additional Mitigation Measures are recommended to mitigate the Proposed Project's impacts to these species. (These two measures are set forth under "Mitigation Measures for Impact WIL-2" after the discussion of Impact WIL-2.)

- WIL-2f (Conduct surveys and avoidance for golden eagle)
- WIL-2g (Conduct surveys and avoidance for burrowing owl)
- WIL-2h (Conduct surveys and avoidance for special-status herpetofauna)
- WIL-2i (Conduct surveys and avoidance for bats)
- WIL-2j (Conduct surveys and avoidance for special-status small mammals)
- WIL-2k (Conduct surveys and avoidance for American badger, ringtail, and desert kit fox)

MSSHCP participation (if SCE obtains PSE status) may result in additional measures to mitigate the Proposed Project's impacts to these species.

Coachella Valley Jerusalem cricket. The Coachella Valley Jerusalem cricket is a California Special Animal and is covered under the CV-MSHCP. Habitat for this species is aeolian sand, found in Segment 6 within the floodplain on the east side of the Whitewater River and east of Whitewater Canyon. Focused surveys conducted in 2011-2012 did not detect Coachella Valley Jerusalem cricket. The project could cause direct and indirect impacts to Coachella Valley Jerusalem cricket through permanent and temporary loss or degradation of aeolian sand habitat. Other potential impacts are disturbance of foraging, dispersal, and breeding activities. Coachella Valley Jerusalem cricket may be present during construction and may be crushed by vehicles, equipment, or personnel or adversely affected by visual disturbances, noise and vibration, or lighting, from construction activities. If SCE obtains PSE status, take of habitat and incidental take of Coachella Valley Jerusalem cricket would be covered under the CV-MSHCP (USFWS, 2008).

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for permanent and temporary effects on habitat for Coachella Valley Jerusalem cricket, and potential loss of individual Coachella Valley Jerusalem cricket.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)

Special-status Raptors

Golden Eagle. The golden eagle is protected under the federal Bald and Golden Eagle Protection Act and is a California fully protected species; it is a covered species under the WR-MSHCP. Golden eagles were observed during 2012 and 2013 wildlife surveys, either soaring or perched within the Proposed Project study area. Additionally, active territories and nests were detected in 2013 during focused golden eagle surveys within a 4-nautical-mile (4.6-mile) survey buffer of the WOD corridor. Golden eagles forage in the project study area in Segments 3, 4, and 5, predominantly in open habitat near the communities of Banning and Cabazon, and have a high potential to forage in Segment 6 as well. Active and potentially active nests have been detected within 10 miles of Segments 4, 5, and 6.

In southern California, golden eagles forage in grasslands, brushlands (coastal sage scrub and sparse chaparral), deserts, oak savannas, and open coniferous forests. Nesting habitat is primarily rugged, mountainous country and nests are built on cliffs, rock outcroppings, and occasionally large trees (USFWS, 2004).

The project could cause direct and indirect impacts on golden eagles through permanent and temporary loss or degradation of suitable habitat and disturbance of foraging and nesting activities. Most of the natural habitats in the project area are potentially foraging habitat for golden eagles; see Table D.4-4 (Section D.4) for temporary and permanent habitat impact acreages. Natural nesting habitat is lacking within the project area; however, golden eagles may nest on large transmission line structures. No direct take of golden eagles is expected.

Take of golden eagle nesting and foraging habitat would be covered within the WR-MSHCP area if SCE becomes a PSE and implements the requirements of the WR-MSHCP (USFWS, 2004). However, no lethal take of golden eagles and no take or disturbance of active golden eagle nests is authorized under the WR-MSHCP. Regardless of MSHCP participation, Consultation with CDFW and USFWS would be required for take of eagles, and incidental take authorization may be required.

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to individual golden eagles and nests, and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)
- WIL-1c (Prepare and implement a Nesting Bird Management Plan)

In addition, Mitigation Measure WIL-2f (Conduct surveys and avoidance for golden eagle), is identified to further mitigate potential Project impacts to golden eagle.

Swainson's Hawk. Swainson's hawk is state-listed as threatened and is covered under the WR-MSHCP. Swainson's hawk migrants were observed during 2012 and 2013 project surveys near Segments 3 and 4. The species also has a moderate potential for occurrence in the remainder of the project area during migration. The project area is outside the species known breeding range and nesting is not expected.

During migration, Swainson's hawks rest and forage in grasslands and fields, often perching on fence posts and utility poles (USFWS, 2004). The project could cause direct and indirect impacts on Swainson's hawk through permanent and temporary loss or degradation of foraging habitat and disturbance of foraging activities. Most of the natural habitats and the agricultural lands in the project area are potential foraging habitat for migrating Swainson's hawk; see Table D.4-4 (Section D.4) for temporary and permanent habitat impact acreages. No direct take of Swainson's hawk is expected.

Take of Swainson's hawk foraging habitat would be covered within the WR-MSHCP area if SCE becomes a PSE and implements the requirements of the WR-MSHCP (USFWS, 2004; page 578). However, no take of individual Swainson's hawk is authorized under the WR-MSHCP, which says "Regardless of MSHCP participation, Consultation with CDFW would be required for take of Swainson's hawk, and incidental take authorization may be required."

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to individual Swainson's hawks, and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)
- WIL-1c (Prepare and implement a Nesting Bird Management Plan)

White-tailed Kite. White-tailed kite is a state fully protected species, and is covered under the WR-MSHCP. It was observed foraging in riparian habitat associated with San Timoteo Creek during 2012 project surveys. Suitable foraging and nesting habitat is present within the Proposed Project study area, particularly in Segments 3 and 4.

The white-tailed kite forages in grasslands, agricultural lands, shrublands, wetlands, and oak woodlands and riparian areas adjacent to open lands. Nesting habitat includes riparian woodland and oak woodland (USFWS, 2004).

The project could cause direct and indirect impacts on white-tailed kite through permanent and temporary loss or degradation of suitable habitat and disturbance of foraging and nesting activities. Most of the natural habitats and the agricultural lands in the project area are potential foraging habitat for white-tailed kite and riparian and woodland areas are potential nesting habitat; see Table D.4-4 (Section D.4) for temporary and permanent habitat impact acreages.

Take of white-tailed kite breeding and foraging habitat would be covered within the WR-MSHCP area if SCE becomes a PSE and implements the requirements of the WR-MSHCP (USFWS, 2004; page 610). However, no take of individual white-tailed kite or nests is authorized under the WR-MSHCP. As a California fully protected species, no take of white-tailed kite may be authorized except through MSHCP coverage.

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to individual white-tailed kites and nests, and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)
- WIL-1c (Prepare and implement a Nesting Bird Management Plan)

American Peregrine Falcon. The American peregrine falcon is a fully protected species in California and is covered under the WR-MSHCP. It was formerly a federally listed endangered species, but was delisted in 1999 due to recovery. It has been observed on or near the project area. It has a moderate potential to forage throughout the project area, and a low potential to nest there.

The American peregrine falcon preys on birds that are caught in flight. It forages over grasslands, agricultural lands, wetlands, and woodlands. Nests are typically built on cliff ledges, but peregrine falcons may nest on large buildings, bridges, and other structures. There is limited natural nesting habitat available in the vicinity of the project area, but peregrine falcons may rarely nest in transmission towers.

The project could cause direct and indirect impacts to peregrine falcon through permanent and temporary loss or degradation of suitable habitat and disturbance of foraging activities. Most of the natural habitats and the agricultural lands in the project area are potential foraging habitat for peregrine falcon; see Table D.4-4 (Section D.4) for temporary and permanent habitat impact acreages.

Take of peregrine falcon habitat would be covered within the WR-MSHCP area if SCE becomes a PSE and implements the requirements of the WR-MSHCP (USFWS, 2004; page 550). However, no take of individual peregrine falcon or nests is authorized under the WR-MSHCP. As a California fully protected species, no take of peregrine falcon may be authorized except through MSHCP coverage.

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to individual peregrine falcons and nests, and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)
- WIL-1c (Prepare and implement a Nesting Bird Management Plan)

Other Special-status Raptors. Special-status raptors observed during project surveys (other than those discussed above) are: osprey (California Special Animal, covered under WR-MSHCP), Cooper's hawk (California Special Animal, covered under WR-MSHCP), ferruginous hawk (California Special Animal, covered under WR-MSHCP), northern harrier (California Species of Special Concern, covered under WR-MSHCP), merlin (California Special Animal, covered under WR-MSHCP), and prairie falcon (California Special Animal, covered under WR-MSHCP). Of these species, only the Cooper's hawk and prairie falcon have a moderate or high potential to nest in or near the project area.

The project could cause direct and indirect impacts to special-status raptors through permanent and temporary loss or degradation of suitable habitat and disturbance of foraging activities. Other impacts may include alteration and disruption of foraging behavior.

Prairie falcon nesting habitat is generally similar to golden eagles', as described above. Cooper's hawks may be present in the project area during construction, and may nest on transmission structures, including within the hollow arms of tubular steel poles. Adult Cooper's hawks will generally flee from disturbance, but construction activities could result in damage to or loss of nests and injury or mortality to eggs and nestlings during tree trimming or removal and construction activities in new or existing transmission structures. Other impacts may include alteration and disruption of foraging and breeding behavior.

Potential habitat for the special-status raptors is found throughout the project area; see Table D.4-4 (Section D.4) for temporary and permanent habitat impact acreages. Take of foraging, roosting, and breeding habitat is covered under the WR-MSHCP within the area of that plan and for the covered species as listed above. Incidental take of individuals or nests is not permitted (USFWS, 2004). Regardless of MSHCP participation, Consultation with CDFW and USFWS would be required, and incidental take authorization may be required.

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to individual raptors and nests, and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)
- WIL-1c (Prepare and implement a Nesting Bird Management Plan)

Burrowing Owl

The burrowing owl is a California Species of Special Concern and protected under the MBTA and California Fish and Game Code. It is covered under the WR-MSHCP and the CV-MSHCP. It has been documented on Segments 5 and 6 of the project, and has a high potential for foraging and nesting on Segments 2, 3, and 4, and a moderate potential for foraging and nesting on Segment 1.

Habitat for burrowing owl is level, sparsely vegetated, open areas such as grassland, agricultural land, scrubland, and disturbed or landscaped open areas (e.g., vacant lots, golf courses, airfields, cemeteries, road margins). The burrowing owl forages on the ground for small reptiles and mammals and invertebrates. It shelters and nests in underground burrows and tends to take cover in its burrow rather than flee from disturbance. It may use abandoned burrows of ground squirrels or other animals, or dig its own burrow if soil conditions allow. Burrowing owl populations in California consist of both year-round residents and wintering owls from outside of the area. Resident owls will use and maintain the burrow year-round (USFWS, 2004).

The project could cause direct and indirect impacts on burrowing owl through permanent and temporary loss or degradation of suitable habitat, destruction of burrows, and disturbance to foraging and breeding activities.

Burrowing owl may be present in the project area during construction. Adult burrowing owls will generally shelter in their burrow rather than flee from disturbance, and construction activities could result in injury and mortality to adults, damage or destruction of burrows, and injury or mortality to eggs and nestlings during grading, vegetation removal, and site preparation. Other impacts include potential injury and mortality from vehicle collisions.

Take of habitat would be covered within the WR-MSHCP and CV-MSHCP areas if SCE becomes a PSE and implements the requirements of the two MSHCPs (USFWS, 2004; USFWS, 2008).

While SCE has proposed APM BIO-4 to protect burrowing owl, this measure is insufficiently detailed, and it is superseded by Mitigation Measure WIL-2g (Conduct surveys and avoidance for burrowing owl), recommended in this section.

Mitigation measures identified in Section D.4 and under Impact WIL-1 listed above (under golden eagle) would, in part, reduce the potential for disturbance to individual burrowing owls, and the permanent and temporary effects to habitat. Due to its behavior, often taking cover within a burrow to escape threats (rather than fleeing), special measures to prevent take of burrowing owl are needed. Mitigation Measure WIL-2g (Conduct surveys and avoidance for burrowing owl) would avoid take of burrowing owl and minimize impacts to its habitat.

Other Special-status Birds. Twenty-four additional special-status birds were observed during project surveys, and three additional species have a high or moderate potential for occurrence. Nine of these species are covered under the WR-MSHCP (great blue heron, black-crowned night heron, loggerhead shrike, California horned lark, purple martin, southern California rufous-crowned sparrow, grasshopper sparrow, Bell's sage sparrow, tricolored blackbird), one is covered under the CV-MSHCP (Le Conte's thrasher), and two are covered under both (yellow-breasted chat, yellow warbler). Some species only occur in the project area during migration or wintering: others occur during the breeding season, or are year-round residents. Please see Table Ap.7-2 (in Appendix 7) for details.

The project could cause direct and indirect impacts to special-status birds through permanent and temporary loss or degradation of suitable habitat and disturbance of foraging and breeding activities. Potential habitat for special-status species is found throughout much of the project area; see Table D.4-4 (Section D.4) for temporary and permanent habitat impact acreages.

Take of foraging and breeding habitat is covered under the WR-MSHCP or CV-MSHCP within the area of each plan and for the covered species as listed above. Permitting of incidental take of individuals varies with species (USFWS, 2004). No take would be authorized outside the two MSHCP coverage areas or within them if SCE does not become a Participating Special Entity in one or both MSHCPs.

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to special-status birds and nests, and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)
- WIL-1c (Prepare and implement a Nesting Bird Management Plan)

Special-status Terrestrial Herpetofauna. Special-status terrestrial herpetofauna (reptiles and amphibians) observed during project surveys (other than desert tortoise, discussed above) are: western spadefoot toad (California Species of Special Concern, covered under WR-MSHCP), coast horned lizard (California Species of Special Concern, covered under WR-MSHCP), coastal western whiptail (California Special Animal, covered under WR-MSHCP), silvery legless lizard (California Species of Special Concern), rosy boa (California Special Animal), and red-diamond rattlesnake (California Species of Special Concern, covered under WR-MSHCP).

Other species with a moderate or high potential to occur within the project area are: San Diego banded gecko (California Special Animal, covered under WR-MSHCP), orange-throated whiptail (California Species of Special Concern, covered under WR-MSHCP), San Bernardino ringneck snake (California Special Animal), coast patch-nosed snake (California Species of Special Concern), and two-striped garter snake (California Species of Special Concern).

The project could cause direct and indirect impacts on special-status terrestrial herpetofauna through permanent and temporary loss or degradation of suitable habitat and disturbance of foraging, dispersal, and breeding activities. Special-status terrestrial herpetofauna may be present during construction and may be adversely affected by visual disturbances, noise and vibration, lighting, and dust from construction

activities. Burrows, nests, or hibernacula located within project disturbance areas may be damaged or destroyed, and adults or young within may be injured or killed. Individuals in the vicinity of construction activities may be disturbed or frightened away by human presence, noise, and activity. Reproduction of amphibians may be affected by impacts to water quality.

Potential habitat for special-status herpetofauna is found throughout much of the project area; see Table D.4-4 (Section D.4) for temporary and permanent habitat impact acreages. Take of habitat and incidental take of individuals is covered under the WR-MSHCP within the area of that plan and for the covered species as listed above (USFWS, 2004).

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to special-status herpetofauna and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)

In addition, Mitigation Measure WIL-2h (Conduct surveys and avoidance for special-status terrestrial herpetofauna), would reduce the potential for loss of individual special-status terrestrial herpetofauna.

Special-status Bats. One special-status bat species was detected during project surveys: western mastiff bat (California Species of Special Concern). Other special-status bat with a moderate or high potential to occur within the project area are: pallid bat (California Species of Special Concern), western red bat (California Species of Special Concern), hoary bat (California Special Animal), western (southern) yellow bat (California Species of Special Concern, covered under CV-MSHCP), western small-footed myotis (California Special Animal), long-eared myotis (California Special Concern Animal), Yuma myotis (California Special Animal), and silver-haired bat (California Special Animal).

Most special-status bats roost in rock crevices, caves, abandoned mine shafts, or old buildings. Others may roost in tree cavities, bark crevices, or foliage. Roost sites may be used seasonally (e.g., hibernacula) or daily (day roosts, used during inactive daylight hours). Maternity roosts (where female bats congregate to give birth and raise young) are particularly important.

Some bats hibernate during winter, others migrate south. During the breeding season, bats generally roost during the day, either alone or in communal roost sites, depending on species. The special-status bats with potential to occur in the project area are all insectivorous, catching their prey either on the wing or on the ground.

The project could cause direct and indirect impacts to special-status bats through permanent and temporary loss or degradation of suitable habitat and disturbance of foraging, dispersal, and breeding activities. Special-status bats may be present during construction and may be adversely affected by visual disturbances, noise and vibration, lighting, and dust from construction activities. Day roosts, hibernacula, and maternity roosts located within project disturbance areas may be damaged or destroyed, and adults or young may be injured or killed. Individual bats in the vicinity of construction activities may be disturbed or frightened away by human presence, noise, and activity.

Potential habitat for special-status bats is found throughout much of the project area; see Table D.4-4 (Section D.4) for temporary and permanent habitat impact acreages. Preferred roosting habitat for the western (southern) yellow bat is fan palm oasis woodland. Take of habitat for western (southern) yellow bat is covered under the CV-MSHCP within the area of that plan (USFWS, 2008).

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to special-status bats, and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)

In addition, Mitigation Measure WIL-2i (Conduct surveys and avoidance for bats), would reduce the potential for loss of special-status bats.

Special-status Small Mammals. Special-status small mammals observed during project surveys (other than the species discussed above) are: San Diego black-tailed jackrabbit (California Species of Special Concern, covered under WR-MSHCP), northwestern San Diego pocket mouse (California Species of Special Concern, covered under WR-MSHCP), pallid San Diego pocket mouse (California Species of Special Concern), Palm Springs pocket mouse (California Species of Special Concern, covered under CV-MSHCP), Los Angeles pocket mouse (California Species of Special Concern, covered under WR-MSHCP), and San Diego desert woodrat (California Species of Special Concern, covered under WR-MSHCP). One additional special-status small mammal species has a moderate potential to occur within the project area: Palm Springs round-tailed ground squirrel (California Species of Special Concern).

The project could cause direct and indirect impacts to special-status small mammals through permanent and temporary loss or degradation of suitable habitat and disturbance of foraging, dispersal, and breeding activities. Special-status small mammals may be present during construction and may be adversely affected by visual disturbances, noise and vibration, lighting, and dust associated with construction activities. Small mammal burrows or nests located within project disturbance areas may be damaged or destroyed, and adults or young within the burrows or nests may be injured or killed. Individual small mammals in the vicinity of construction activities may be disturbed or frightened away by human presence, noise, and activity.

The San Diego desert woodrat constructs above-ground middens, composed of sticks, rocks, and other materials. The midden is used for cover, nesting, and food caching, and may be occupied and added on to for generations. It is usually built against a rock crevice or at the base of a tree, shrub, or cactus. Middens typically have multiple chambers and several entrances. In addition to the potential impacts listed above, impacts to San Diego desert woodrat include damage to or destruction of middens during vegetation clearing activities, loss of food caches, and adults or young within the middens being injured or killed.

Potential habitat for the special-status small mammals is found throughout much of the project area; see Table D.4-4 (Section D.4) for temporary and permanent habitat impact acreages. Take of habitat and individual animals is covered under the WR-MSHCP within the area of that plan and for the covered species as listed above (USFWS, 2004).

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to special-status small mammals, and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)

The PEA identifies APM BIO-12 as mitigation for potential impacts to Los Angeles pocket mouse and Palm Springs pocket mouse; however this measure has been found to be insufficiently detailed, and it is superseded by Mitigation Measure WIL-2j (Conduct surveys and avoidance for special-status small mammals). This mitigation measure, in combination with the measures listed above, would reduce the potential for loss of individual special-status small mammals.

American Badger, Ringtail, and Desert Kit Fox. The American badger is a California Species of Special Concern. It is not covered by the WR-MSHCP or CV-MSHCP. It has a moderate potential for occurrence throughout natural open space areas in the project area. Badgers prefer open areas in grasslands and shrublands with dry, friable soils for burrowing. Badgers dig burrows for cover and for rearing cubs.

The ringtail is fully protected in California. It is not covered by the WR-MSHCP or CV-MSHCP. It has a moderate potential for occurrence throughout natural open space areas in the project area. Suitable habitat for ringtail is forest and shrubland with rocky areas, usually near permanent water and riparian areas. Ringtails den and rear their cubs in rock crevices, hollow logs, abandoned burrows, or woodrat middens.

The desert kit fox is classified as a protected furbearing mammal by CDFW. It is not covered by the WR-MSHCP or CV-MSHCP. It has a moderate potential for occurrence on the arid, eastern end (Segments 4, 5, and 6) of the project. Desert kit fox habitat includes open, arid scrublands, grasslands, and agricultural lands. Kit foxes dig burrows for cover and for rearing pups. Canine distemper outbreaks have been a recent concern.

The project could cause direct and indirect impacts on American badger, ringtail, and desert kit fox through permanent and temporary loss or degradation of suitable habitat and disturbance of foraging and breeding activities. American badger, ringtail, and desert kit fox may be present during construction and may be adversely affected by visual disturbances, noise and vibration, lighting, and dust from construction activities. Badger, ringtail, or kit fox dens located within project disturbance areas may be damaged or destroyed, and adults or pups/kits within the dens may be injured or killed. Individuals in the vicinity of construction activities may be disturbed or frightened away by human presence, noise, and activity.

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to desert kit fox, ringtail, and badger, and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)

In addition, Mitigation Measure WIL-2k (Conduct surveys and avoidance for American badger, ringtail, and desert kit fox), would reduce the potential for disturbance to desert kit fox, ringtail, and badger and their dens and young.

Nelson's Bighorn Sheep. The USFWS and CDFW recognize multiple populations of Nelson's bighorn sheep referred to as distinct population segments (DPS). The peninsular DPS occupies the Peninsular Ranges of southern California and is federally listed as endangered and state listed as threatened. The range of the peninsular DPS does not extend north of Interstate 10 and is approximately 0.8 miles (4,200 feet) south of the Proposed Project study area and vicinity. The bighorn sheep population that could occur in the project area is not state or federally listed, but all bighorn sheep are fully protected in California with the exception of legal sport hunting in specific areas. The peninsular population of bighorn is covered under the CV-MSHCP, but the non-peninsular population is not.

The non-peninsular bighorn population is known from the Whitewater Canyon and Whitewater River area about 3.5 miles upstream from Segment 6. Bighorn sheep prefer open, steep terrain, particularly for lambing, but may use lowland habitat for foraging and dispersal. There is a moderate potential for Nelson's bighorn sheep (non-peninsular population) to occur in lowland habitat in or near the project area (Segments 5 and 6) during foraging and dispersal activities, but not during lambing. No bighorn sheep were observed during surveys conducted for the project from 2011 to 2013. The Proposed Project could cause direct and indirect impacts to bighorn sheep through permanent and temporary loss or degradation of suitable habitat and disturbance of foraging and dispersal activities. Bighorn sheep may be present during construction and may be adversely affected by visual disturbances, noise and vibration, and dust from construction activities. Bighorn sheep in the vicinity of construction activities may be disturbed or frightened away by human presence, noise, and activity.

In the project area, potential bighorn forage and dispersal habitat includes the native vegetation communities on Segments 5 and 6, particularly desert scrub and alluvial scrub; see Table D.4-4 (Section D.4) for temporary and permanent habitat impact acreages.

The following mitigation measures identified in Section D.4 and under Impact WIL-1 would reduce the potential for disturbance to Nelson's bighorn sheep and the permanent and temporary effects to habitat.

- VEG-1a (Conduct biological monitoring and reporting)
- VEG-1b (Prepare and implement worker environmental awareness program [WEAP])
- VEG-1c (Minimize native vegetation and habitat loss)
- VEG-1d (Restore or revegetate temporary disturbance areas)
- VEG-1e (Compensate for permanent habitat loss)
- VEG-2a (Prepare and implement an integrated weed management plan)
- WIL-1a (Conduct pre-construction biological resource surveys)
- WIL-1b (Ensure wildlife impact avoidance and minimization)

Mitigation Measures for Impact WIL-2: Construction, restoration, operations, and maintenance activities could cause direct or indirect loss of listed and special-status wildlife and direct or indirect effects to habitat for listed and special-status wildlife

WIL-2a Conduct desert tortoise surveys, monitoring, and avoidance. Methods for clearance surveys, fence specification and installation, tortoise handling, artificial burrow construction, egg handling, and other procedures shall be consistent with those described in the USFWS (2009) *Desert Tortoise Field Manual* or more current guidance provided by CDFW and USFWS.

Desert tortoise shall be handled only by a USFWS/CDFW permitted and authorized biologist (Authorized Biologist) following appropriate USFWS protocols and in compliance with appropriate regulatory permits. A biological monitor shall monitor construction activities in all areas with the potential to support desert tortoise. Observations of desert tortoise or sign shall be immediately communicated to the Authorized Biologist.

Within suitable habitat for desert tortoise, SCE shall survey the project area for desert tortoise burrows and pallets within fourteen (14) days preceding the initial start of construction. Follow-up surveys shall also be conducted within fourteen (14) days preceding additional construction after a gap in significant construction activities of 60 calendar days or more. Surveys shall include 100 percent of the area to be disturbed and a surrounding buffer of 100 feet.

Subject to authorization by CDFW and USFWS, tortoise burrows and pallets encountered within the disturbance area (if any) shall be conspicuously flagged by the surveying biologist(s) and avoided during construction activities. If a burrow suitable for desert tortoise cannot be avoided, it shall be excavated carefully using hand tools, by or under the supervision of an Authorized Biologist, and collapsed or blocked to prevent desert tortoise reentry. If the burrow is occupied, the Authorized Biologist may move the tortoise to another burrow.

Project personnel shall inspect for desert tortoises under parked vehicles or equipment prior to moving same. If a desert tortoise is found beneath a vehicle or equipment, the vehicle or equipment shall not be moved until the tortoise has voluntarily moved to a safe distance away. If the tortoise does not move on its own accord after 20 minutes, the tortoise may be moved by an Authorized Biologist, subject to authorization by CDFW and USFWS.

If a desert tortoise is found in a work area, the tortoise shall be allowed to passively traverse the site while construction in the immediate area is halted. If the tortoise does not move out of harm's way after 20 minutes, the tortoise may be moved by an Authorized Biologist, subject to conditions and authorization by CDFW and USFWS.

Subject to authorization by CDFW and USFWS, desert tortoises shall be moved the minimum distance possible within appropriate habitat. In general, desert tortoise will not be moved in excess of 1,000 feet for adults and 300 feet for hatchlings. Desert tortoises that are moved shall be placed in the shade of a shrub. After being moved, the desert tortoise shall be monitored to ensure its safety. Any time a tortoise is handled, the Authorized Biologist shall take photographs and record pertinent data in their daily monitoring report. This information shall be summarized and submitted to CPUC and BLM in annual environmental compliance reports.

Subject to authorization by CDFW and USFWS, a desert tortoise removed from its burrow shall be placed in an unoccupied burrow of approximately the same size and orientation. If an existing burrow is unavailable, the Authorized Biologist will construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original burrow. Desert

tortoises moved during inactive periods will be monitored for at least two days after placement in the new burrow to ensure their safety.

Subject to authorization by CDFW and USFWS, if a desert tortoise is moved at a time of the day when ambient temperatures are unfavorable (less than 40 degrees F or greater than 90 degrees F) it shall be held overnight in a clean cardboard box. The desert tortoise shall be kept in the care of the Authorized Biologist under appropriate controlled temperatures and released the following day when temperatures are favorable. All cardboard boxes will be appropriately discarded after one use.

Implementation locations: This mitigation measure shall apply in desert tortoise habitat within the project area (Segments 5 and 6), subject to the stipulations listed above. Specifically, this mitigation measure applies on BLM lands, throughout the CV-MSHCP area (regardless of SCE's PSE status), and is recommended on all Morongo Tribal Lands. No suitable desert tortoise habitat is present within San Bernardino County and the WR-MSHCP; therefore, this mitigation measure does not apply in these jurisdictions.

WIL-2b Prepare and implement Raven Monitoring, Management, and Control Plan. SCE shall prepare and implement a Raven Monitoring, Management, and Control Plan (Raven Plan) consistent with USFWS raven management guidelines and that meets the approval of the CPUC and BLM in consultation with USFWS, and CDFW. The purpose of the Raven Plan shall be to minimize project-related predator subsidies and prevent any increases in raven numbers or activity within desert tortoise habitat during construction, restoration, and O&M phases. The Plan shall address all project components and their potential effects on raven numbers and activity. The threshold for implementation of raven control measures shall be any increases in raven numbers from baseline conditions, as detected by monitoring to be implemented pursuant to the Plan. Regardless of raven monitoring results, SCE shall be responsible for all other aspects of raven management described in the Raven Plan, such as avoidance and minimization of project-related trash, water sources, or perch/roost/nest sites that could contribute to increased raven numbers. In addition, to offset the cumulative contributions of the project to desert tortoise impacts from increased raven numbers, SCE shall contribute to the USFWS Regional Raven Management Program. SCE shall:

1. **Prepare and Implement a Raven Management Plan** that shall include, but shall not be limited to the following components. The Plan shall be reviewed and approved by CPUC, BLM, USFWS, and CDFW prior to the start of construction activities.
 - a. Identify all potential project activities, structures, components, and other effects that could provide predator subsidies or attractants, including potential sources of food and water, and nesting materials, as well as nest or perch sites. These will include, but will not be limited to: waste food material, road-killed animals, water storage, potential pooling from leaks, dust control, or wastewater, debris from brush clearing, and perch or roost sites on project facilities and infrastructure.
 - b. Describe management practices to avoid or minimize conditions that might increase raven numbers and predatory activities.
 - c. Appoint a qualified biologist who will implement a monitoring schedule and field methods for the purpose of locating any ravens present in the project vicinity and detecting any increase in raven numbers or activity.
 - d. Specify raven activity thresholds for implementation of control measures.

- e. Describe control practices for ravens to be implemented as needed based on the monitoring results.
 - f. Address monitoring and nest removal during construction and for the life of the project.
 - g. Describe reporting schedules and requirements.
- 2. Contribute to the USFWS Regional Raven Management Program.** No later than 30 days prior to the start of construction, SCE shall contribute to the USFWS Regional Raven Management Program by making a one-time payment of \$105 per acre of long-term or permanent project disturbance within the geographic range of desert tortoise, or as specified by the USFWS, to the National Fish and Wildlife Foundation Renewable Energy Action Team raven control account.

Implementation locations: This mitigation measure applies on BLM lands and is recommended on all Morongo Tribal Lands. No suitable desert tortoise habitat is present within San Bernardino County and the WR-MSHCP; therefore, this mitigation measure does not apply in these jurisdictions. In the CV-MSHCP, this mitigation measure shall apply in its entirety regardless of SCE's PSE status.

WIL-2c Conduct surveys and avoidance for threatened or endangered riparian birds. Construction activities shall avoid suitable habitat for listed riparian birds. If suitable habitat cannot be avoided, SCE shall consult with CDFW and USFWS and obtain appropriate take authorizations or permits. SCE shall implement the conservation measures contained within these permits.

If construction activities will occur during the breeding season potentially suitable habitat for listed riparian birds, a qualified biologist shall conduct protocol surveys of the project area and adjacent areas within 500 feet. USFWS protocol surveys shall be conducted for southwestern willow flycatcher, yellow-billed cuckoo, and least Bell's vireo. The surveys shall be of adequate duration to verify potential nest sites if work is scheduled to occur during the breeding season. Where protocol surveys determine that listed riparian birds are present, SCE shall conduct additional focused nest location surveys, to determine the locations of nests and territories. Survey areas shall include a 500-foot buffer around project disturbance areas.

Protocol surveys, shall be conducted within one year prior to the start of construction and shall continue annually during each nesting season until completion of construction and restoration activities. At a minimum, surveys shall be conducted from 15 May to 17 July for southwestern willow flycatcher, from 10 April to 31 July for least Bell's vireo, and from 1 June to 31 August for yellow-billed cuckoo.

These surveys may be modified through coordination with the USFWS, CDFW, BLM, and the CPUC based on the condition of habitat, the observation of the species, or avoidance of riparian areas during the breeding season. SCE shall submit documentation providing results of the protocol surveys for listed riparian birds to the CPUC and BLM for review and approval in consultation with USFWS and CDFW.

If an active breeding territory or nest is confirmed, the CPUC, BLM, USFWS, and CDFW shall be notified immediately. All active nests shall be monitored on a weekly basis until the nestlings fledge or the nest becomes inactive. SCE shall provide monitoring reports to the CPUC and BLM for review in consultation with USFWS and CDFW.

In coordination with the USFWS and CDFW, a 500-foot disturbance-free ground buffer and 1,000-foot vertical helicopter buffer shall be established around the active nest and

demarcated by fencing or flagging. No construction or vehicle traffic shall occur within nest buffers, except on existing paved public roads.

If an active breeding territory or nest is confirmed within 500 feet of any project activity site, SCE shall prepare and implement a Wildlife Noise Monitoring Plan throughout construction and demolition activities taking place while listed riparian birds occupy the nesting territory. Sound levels at the nest sites shall not exceed 8 dBA above ambient levels or 70 dBA (hourly average Leq), whichever is greater. Ambient levels will be established prior to initiation of construction and demolition, using the same methodology that will be used to take noise measurements during monitoring.

If the hourly average noise threshold is exceeded, or if the biological monitor determines that construction activities are disturbing nesting birds, additional noise reduction techniques shall be implemented to reduce project noise below the thresholds. Additional noise monitoring will be conducted to verify the reduction of noise levels below the thresholds. Noise reduction techniques can include, but are not limited to:

- Temporary noise barriers or sound walls
- Noise pads or dampers
- Replace and update noisy equipment
- Moveable task noise barriers
- Queue trucks to distribute idling noise
- Locate vehicle access points and loading and shipping facilities away from the nest site
- Reduce the number of noisy activities that occur simultaneously
- Relocate noisy stationary equipment away from the nest sites

Implementation locations: This mitigation measure applies on BLM lands, throughout the WR-MSHCP and CV-MSHCP areas (regardless of SCE's PSE status), and within San Bernardino County, and is recommended on all Morongo Tribal Lands.

WIL-2d Conduct surveys and avoidance for Stephens' kangaroo rat. Prior to the start of construction, within suitable habitat for Stephens' kangaroo rat (SKR), SCE shall conduct focused surveys to determine if SKR sign (burrows, scat, and etc.) is present in all areas within 100 feet of work sites or other project activities that would permanently or temporarily affect soils or vegetation. All surveys shall be conducted by a qualified biologist who holds the appropriate USFWS permits to conduct trapping surveys for SKR. If sign is present, then SCE shall conduct focused trapping surveys according to accepted protocols to determine presence or absence of SKR. If SKR are present, then SCE shall take additional measures to prevent or minimize take, such as installation of exclusion fences or other measures, subject to authorization by USFWS and CDFW.

Construction activities shall avoid suitable SKR habitat to the extent feasible. If SKR habitat cannot be avoided, SCE shall consult with CDFW and USFWS and obtain appropriate take authorization or permits. SCE shall implement the conservation measures contained within these permits.

Implementation locations: This mitigation measure shall apply within San Bernardino County, throughout the WR-MSHCP area (regardless of SCE's PSE status), and is recommended within Morongo Tribal Lands. No suitable SKR habitat is present in the CV-MSHCP portions of the ROW or on BLM land, so this mitigation measure shall not apply within those areas.

WIL-2e **Conduct surveys and avoidance for coastal California gnatcatcher.** SCE shall conduct protocol level surveys for coastal California gnatcatchers (CAGN) in all areas of coastal sage scrub habitat that may be affected by the project. Survey areas will include a 500-foot buffer around project disturbance areas. Presence or absence of CAGN shall be determined prior to construction activities. In occupied CAGN habitat, SCE shall conduct additional focused nest location surveys to determine the locations of nests and territories. Survey areas shall include a 500-foot buffer around project disturbance areas.

Surveys shall be conducted by qualified and permitted biologists. Surveys shall be of adequate duration to verify potential nest sites if work is scheduled to occur during the breeding season. Prior to construction, SCE shall submit documentation providing the results of the pre-construction focused surveys for CAGN to the CPUC and BLM for review and approval in consultation with USFWS and CDFW.

Protocol or focused nest location surveys, as appropriate, shall be conducted within one year prior to the start of construction and shall continue annually until completion of construction and restoration activities.

If an active breeding territory or nest is confirmed, the CPUC, BLM, USFWS, and CDFW shall be notified immediately and the observation will be included in the daily monitoring report. All active nests shall be monitored on a weekly basis until the nestlings fledge or the nest becomes inactive. SCE shall provide monitoring reports to the CPUC and BLM for review on a weekly basis.

In coordination with the USFWS and CDFW, a 500-foot disturbance-free ground buffer and 1,000-foot vertical helicopter disturbance-free buffer shall be established around the active nest and demarcated by fencing or flagging. These buffers may be adjusted in consultation with USFWS and CDFW based on type of work activity performed. No construction or vehicle traffic shall occur within nest buffers, except on existing paved public roads.

If an active breeding territory or nest is confirmed within 500 feet of any project activity site, the authorized nesting bird monitor shall monitor the nesting bird to evaluate impacts to the bird. If the construction, and associated noise, impacts nesting, in the opinion of the authorized nesting bird monitor, construction within 500 feet will immediately discontinue. If the authorized nesting bird monitor determines that construction may continue, SCE shall prepare and implement a Wildlife Noise Monitoring Plan throughout construction and demolition activities taking place while CAGN occupy the nesting territory. Sound levels at the nest sites shall not exceed 8 dBA above ambient levels or 70 dBA (hourly average Leq), whichever is greater. Ambient levels will be established prior to initiation of construction and demolition, using the same methodology that will be used to take noise measurements during monitoring.

If the hourly average noise threshold is exceeded, or if the biological monitor determines that construction activities are disturbing nesting CAGN, additional noise reduction techniques shall be implemented to reduce project noise below the thresholds. Additional noise monitoring will be conducted to verify the reduction of noise levels below the thresholds. Noise reduction techniques can include, but are not limited to:

- Temporary noise barriers or sound walls
- Noise pads or dampers
- Replace and update noisy equipment
- Moveable task noise barriers
- Queue trucks to distribute idling noise

- Locate vehicle access points and loading and shipping facilities away from the nest site
- Reduce the number of noisy activities that occur simultaneously
- Relocate noisy stationary equipment away from the nest sites

Construction activities shall avoid suitable habitat for CAGN, to the extent feasible. If suitable habitat cannot be avoided, SCE shall consult with CDFW and USFWS to obtain appropriate take authorization or permits. SCE shall implement the conservation measures contained within these permits.

Implementation locations: This mitigation measure shall apply within San Bernardino County, throughout the WR-MSHCP lands (regardless of SCE's PSE status), and is recommended within Morongo Tribal Lands. No suitable CAGN habitat is present in the CV-MSHCP portions of the ROW or on BLM land, so this mitigation measure shall not apply within those areas.

WIL-2f

Conduct surveys and avoidance for golden eagle. SCE shall implement the following measures to document golden eagle occurrence in the project area and surrounding mountains. Survey schedule and requirements will be as identified below unless otherwise authorized by the CPUC and BLM in consultation with the USFWS and CDFW.

- **Annual Nesting Season Surveys.** Beginning at least one year prior to the start of construction, and continuing throughout the construction phase of the project, SCE shall contract with a qualified biologist to conduct nesting season surveys of golden eagle habitat use within a 2-mile radius of the portions of the project area where work will occur during the breeding season (December 1 through July 31). Nesting season surveys will determine occupancy, productivity, and chronology of known or newly discovered nesting territories within the 2-mile radius. Survey methods for the inventory shall be either ground-based or helicopter-based, as described in the Golden Eagle Technical Guidance (Pagel et al., 2010) or more current guidance from the USFWS.
- **Nesting Season Inventory Data.** At a minimum, data collected during the nesting season surveys shall include the following: territory status (unknown, vacant, occupied, breeding successful, breeding unsuccessful); nest location, nest elevation; age class of golden eagles observed; nesting chronology; number of young at each visit; photographs; and substrate upon which nest is placed.
- **Determination of Unoccupied Territory Status.** A nesting territory or inventoried habitat shall be considered unoccupied by golden eagles only after completing at least two full surveys in a single breeding season.
- **Nest Buffer.** If an occupied nest (as defined by Pagel et al., 2010) is detected within 2 miles of the project, SCE shall implement a one mile line-of-sight and one-half mile no line-of-sight buffer to ensure that project construction activities do not result in injury or disturbance to golden eagles. Triggers for adaptive management shall include any evidence of project-related disturbance to nesting golden eagles, including but not limited to: agitation behavior (displacement, avoidance, and defense); increased vigilance behavior at nest sites; changes in foraging and feeding behavior, or nest site abandonment. Adaptive management actions, include, but are not limited to, cessation of construction activities that are deemed by a qualified biologist to be the source of golden eagle disturbance.
- **Reporting.** Golden eagle survey data and, if applicable, nest activity monitoring results and any adaptive management actions taken, will be provided to CPUC, BLM, CDFW, and USFWS in monthly monitoring reports, as seasonal data becomes available and if specific

nest monitoring or any adaptive management actions are taken, and summarized in annual project monitoring reports.

Implementation locations: This mitigation measure shall apply within San Bernardino County, on BLM lands, and within the CV-MSHCP and WR-MSHCP areas (regardless of SCE's PSE status), and is recommended within Morongo Tribal Lands.

WIL-2g Conduct surveys and avoidance for burrowing owl. Burrowing owl surveys shall be conducted in accordance with the most current CDFW guidelines (CDFG, 2012; or updated guidelines as they become available). SCE shall take measures to avoid impacts to any active burrowing owl burrow within or adjacent to a work area. The default buffer for a burrowing owl burrow is 300 feet for ground construction, and 300 feet horizontal and 200 feet vertical for helicopter construction. The Nesting Bird Management Plan (Mitigation Measure WIL-1c) will specify a procedure for adjusting this buffer, if needed. Binocular surveys may be substituted for protocol field surveys on private lands adjacent to the project site only when SCE has made reasonable attempts to obtain permission to enter the property for survey work but was unable to obtain such permission.

If active burrowing owl burrows are located within project work areas, SCE may passively relocate the owls by preparing and implementing a Burrowing Owl Passive Relocation Plan, as described below. SCE shall prepare a draft Burrowing Owl Passive Relocation Plan for review and approval by CPUC and BLM in consultation with CDFW and USFWS prior to the start of any ground-disturbing activities. SCE may not initiate burrowing owl passive relocation prior to finalization of the Plan and approval by CPUC and BLM. No active relocation shall be permitted. No passive relocation of burrowing owls shall be permitted during breeding season, unless a qualified biologist verifies through non-invasive methods that an occupied burrow is not occupied by a mated pair, and only upon authorization by CDFW. The Plan shall include, but not be limited to, the following elements:

- **Assessment of Suitable Burrow Availability.** The Plan shall include an inventory of existing, suitable, and unoccupied burrow sites within 300 feet of the affected project work site. Suitable burrows will include inactive desert kit fox, ground squirrel, or desert tortoise burrows that are deep enough to provide suitable burrowing owl nesting sites, as determined by a qualified biologist. If two or more suitable and unoccupied burrows are present in the area for each burrowing owl that will be passively relocated, then no replacement burrows will need to be built.
- **Replacement Burrows.** For each burrowing owl that will be passively relocated, if fewer than two suitable unoccupied burrows are available within 300 feet of the affected project work site, then SCE shall construct at least two replacement burrows within 300 feet of the affected project work site. Burrow replacement sites shall be in areas of suitable habitat for burrowing owl nesting, and subject to minimal human disturbance and access. The Plan shall describe measures to ensure that burrow installation or improvements would not affect sensitive species habitat or any burrowing owls already present in the relocation area. The Plan shall provide guidelines for creation or enhancement of at least two natural or artificial burrows for each active burrow within the project disturbance area, including a discussion of timing of burrow improvements, specific location of burrow installation, and burrow design. Design of the artificial burrows shall be consistent with CDFW guidelines (CDFG, 2012; or more current guidance as it becomes available) and shall be approved by the CPUC, BLM, CDFW, and USFWS.

- **Methods.** Provide detailed methods and guidance for passive relocation of burrowing owls, outside the breeding season. An occupied burrow may not be disturbed during the nesting season (generally, but not limited to, February 1 to August 31), unless a qualified biologist determines, by non-invasive methods, that it is not occupied by a mated pair. Passive relocation would include installation of one-way doors on burrow entrances that would let owls out of the burrow but would not let them back in. Once owls have been passively relocated, burrows will be carefully excavated by hand and collapsed by, or under the direct supervision, of a qualified biologist.
- **Monitoring and Reporting.** Describe monitoring and management of the replacement burrow site(s), and provide a reporting plan. The objective shall be to manage the relocation area for the benefit of burrowing owls, with the specific goal of maintaining the functionality of the burrows for a minimum of two years. Monitoring reports shall be available to the CPUC and BLM on a weekly basis.

Implementation locations: This mitigation measure shall apply within San Bernardino County, on BLM lands, and within the WR-MSHCP and CV-MSHCP areas (regardless of SCE's PSE status), and is recommended within Morongo Tribal Lands.

WIL-2h Conduct surveys and avoidance for special-status terrestrial herpetofauna. This measure will not apply to desert tortoise; instead, surveys and avoidance for desert tortoise are addressed in Mitigation Measure WIL-2a. Biological monitors shall conduct clearance surveys in areas with suitable habitat for special-status terrestrial herpetofauna prior to construction each day, monitor construction activities for compliance, and submit monitoring reports to the CPUC and BLM for review on a weekly basis. Following the clearance surveys, either (1) exclusion fencing will be erected or (2) a biological monitor will be on the site during construction activities, to prevent take of special-status herpetofauna. If the installation of exclusion fencing is deemed necessary, the biological monitor shall direct the installation of the fence.

If any terrestrial herpetofauna are found on the construction site, the animal will be allowed to move away from the construction site on its own, or a qualified biologist will relocate it nearby suitable habitat outside the construction area and place it in the shade of a shrub. If potentially suitable burrows or rock piles are found, they will be checked for occupancy. Occupied burrows will be flagged and avoided (employing a 50-foot buffer) during construction. If the burrow cannot be avoided, it will be excavated and the occupant relocated to an unoccupied burrow outside the construction area and of approximately the same size as the one from which it was removed. If an existing burrow is unavailable, the biologist will construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original.

Implementation locations: This mitigation measure shall apply within San Bernardino County, on BLM lands, within the WR-MSHCP and CV-MSHCP areas (regardless of SCE's PSE status), and is recommended within Morongo Tribal Lands.

WIL-2i Conduct surveys and avoidance for bats. SCE shall conduct surveys for roosting bats within 300 feet of project activities, within 14 days prior to any grading of rocky outcrops or removal of towers or trees, particularly palm trees and large trees (12 inches in diameter or greater at 4.5 feet above grade) with loose bark or other cavities. Surveys shall be conducted during the breeding season (1 March to 31 July) and the non-breeding season. Surveys shall be performed by a qualified bat biologist (i.e., a biologist holding a CDFW collection permit and a Memorandum of Understanding with CDFW allowing the biologist to handle bats). The resume of the

biologist shall be provided to the CPUC and BLM for concurrence in consultation with CDFW and USFWS prior to the biologist beginning field duties on the project. Surveys shall include a minimum of one day and one evening.

Any active bat roosts, including occupied day roosts, maternity roosts, and hibernacula, will be identified and clearly marked. An exclusion area will be established 165 feet from any active roost, and these areas will be avoided during construction activities. If active roosts are found, then focused surveys shall be conducted to determine if the sites support special-status bat species.

SCE shall submit documentation providing pre-construction survey results and any avoidance of roosting and nursery sites to the CPUC and BLM for review and approval.

Non-special-status bats. If non-breeding bat hibernacula are found in towers or trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the bats shall be safely evicted, under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). In situations requiring one-way doors, a minimum of one week shall pass after doors are installed and temperatures must be sufficiently warm for bats to exit the roost because bats do not typically leave their roost daily during winter months in southern coastal California. This action will allow all bats to leave during the course of one week. Roosts that need to be removed, in situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist, shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal).

If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed) by the project. If avoidance of the maternity roost is not feasible, the bat biologist shall survey (through the use of radio telemetry or other CDFW approved methods) for nearby alternative maternity colony sites. If the bat biologist determines in consultation with and with the approval of the CDFW, BLM, and CPUC that there are alternative roost sites used by the maternity colony and young are not present, then no further action is required and it will not be necessary to provide alternate roosting habitat. However, if there are no alternative roosts sites used by the maternity colony, substitute bat roosting habitat shall be provided, as detailed below. If an active maternity roost is located in an area to be impacted by the project, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., prior to 1 March) or after young are flying (i.e., after 31 July) using the exclusion techniques described above.

If a maternity roost will be impacted by the project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the project site no less than three months prior to the eviction of the colony. Alternative roost sites will be constructed in accordance with the specific bats requirements in coordination with CDFW. By making the roosting habitat available prior to eviction, the colony will have a better chance of finding and using the roost. Large concrete walls (e.g., on bridges) on south or southwestern slopes that are retrofitted with slots and cavities are an example of structures that may provide alternative roosting habitat appropriate for maternity colonies. Alternative roost sites must be of comparable size and proximal

in location to the impacted colony. The CDFW shall also be notified of any hibernacula or active nurseries within the construction zone.

Special-status bats. If special-status bat species occur at these day roosts, maternity roosts, or hibernacula, then construction activities shall avoid these sites and a surrounding buffer distance of 300 feet. If construction activities cannot avoid these sites, construction at these sites shall be delayed until the breeding cycles for the special-status bats are completed. SCE shall consult with a bat specialist in order to determine when the breeding cycle for the special-status bats is completed. SCE shall consult with CDFW regarding eviction of non-breeding special-status bats.

Implementation locations: This mitigation measure shall apply within San Bernardino County, on BLM lands, within the WR-MSHCP and CV-MSHCP areas (regardless of SCE's PSE status), and is recommended within Morongo Tribal Lands.

WIL-2j Conduct surveys and avoidance for special-status small mammals. SCE shall implement pre-construction surveys for special-status small mammals including San Diego black-tailed jackrabbit, northwestern San Diego pocket, pallid San Diego pocket mouse, Palm Springs pocket mouse, Los Angeles pocket mouse, Palm Springs round-tailed ground squirrel, and San Diego desert woodrat in suitable habitats. SCE shall submit documentation providing pre-construction survey results to the CPUC and BLM for review and approval in consultation with CDFW and USFWS. Prior to initiating construction-related activities, SCE shall prepare and implement construction minimization measures and habitat conservation measures for review and approval by CPUC and BLM in consultation with USFWS and CDFW to minimize habitat loss and potential take.

Active woodrat nests that may be occupied by *Neotoma lepida* shall be flagged and ground-disturbing activities shall be avoided within a minimum of 10 feet surrounding each active nest unless otherwise authorized by the CDFW and CPUC. If avoidance is not possible, SCE shall take the following sequential steps: (1) all understory vegetation will be cleared in the area immediately surrounding active nests followed by a period of one night without further disturbance to allow woodrats to vacate the nest, (2) each occupied nest will then be disturbed by a qualified wildlife biologist until all woodrats leave the nest and seek refuge off-site, and (3) the nest sticks shall be removed from the project site and piled at the base of a nearby shrub or tree. Relocated nests shall not be spaced closer than 100 feet apart, unless a qualified wildlife biologist has determined that a specific habitat can support a higher density of nests. SCE shall document all woodrat nests moved in weekly monitoring reports, and will include a written summary in each annual report to the CPUC, BLM, and CDFW. The resumes of the qualified biologists shall be provided to the CPUC and BLM (as appropriate) for concurrence.

Implementation locations: This mitigation measure shall apply within San Bernardino County, on BLM lands, within the WR-MSHCP and CV-MSHCP areas (regardless of SCE's PSE status), and is recommended within Morongo Tribal Lands.

WIL-2k Conduct surveys and avoidance for American badger, ringtail, and desert kit fox. SCE shall conduct pre-construction surveys for desert kit fox, ringtail, and American badger no more than 30 days prior to initiation of construction activities. Surveys shall be conducted in areas that contain habitat for these species and shall include project disturbance areas and access roads plus a 300 buffer surrounding these areas. SCE shall submit documentation providing pre-construction survey results to the CPUC and BLM for review and approval. If dens

are detected, each den shall be classified as inactive, potentially active, active non-natal or active natal.

Inactive dens located in project disturbance areas may be excavated by hand and backfilled to prevent reuse, only upon confirmation that they are inactive.

Active or potentially active dens shall be flagged and project activities, with exceptions as listed below, within 100 feet (non-natal dens) or 500 feet (natal dens or any active den during the breeding season) shall be avoided. Ingress/egress of construction vehicles and equipment through buffers and low intensity activities such as inspections and BMP maintenance within buffers is allowed, provided a qualified biologist determines that these activities will not impact dens or denning animals. Buffers may be modified with concurrence of CPUC and BLM, in consultation with CDFW and USFWS. If active dens are found within project disturbance areas and avoidance is not possible, SCE shall take action as specified below, after notifying and obtaining concurrence from CPUC, BLM, and CDFW.

Active and potentially active non-natal dens. Outside the breeding season, any potentially active dens that would be directly impacted by construction activities shall be monitored by a qualified mammologist or biologist for three consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den may be excavated and backfilled by hand. If tracks are observed, the den may be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage continued use. After verification that the den is no longer active the den may be excavated and back-filled by hand.

Active natal dens. Active natal dens (any den with cubs or pups) or any den active during the breeding season will not be excavated or passively relocated. The cub or pup-rearing season is generally from January 15 through mid-September. A 500-foot no-disturbance buffer shall be maintained around all active natal dens. Discovery of an active natal den that could be impacted by the project shall be reported to the CPUC, BLM, and CDFW within 24 hours of the discovery along with a map of the den location and a copy of the survey results. A qualified biologist shall monitor the natal den until he or she determines that the pups have dispersed. Any disturbance to denning animals or activities that might disturb denning activities shall be prohibited within the buffer zone. Once the pups have dispersed, methods listed above for non-natal dens may be used to discourage den reuse. After verification that the den is unoccupied, it shall then be excavated by hand and backfilled to ensure that no animals are trapped in the den.

If canine distemper is reported in desert kit fox on the site or surrounding areas, then SCE shall coordinate with CPUC, BLM, and CDFW to identify appropriate actions prior to continuing implementation of this mitigation measure in respect to desert kit fox. Any observations of a kit fox that appears sick or any kit fox mortality shall be reported to CPUC, CDFW, and BLM within one work day.

In the event that passive relocation techniques fail, SCE shall contact the CPUC, BLM, and CDFW to explore other relocation options.

All den monitoring and excavation activities and passive relocations shall be documented and reported to the CDFW, BLM, and CPUC in weekly monitoring reports, and a written summary will be included in each annual monitoring report.

Implementation locations: This mitigation measure shall apply within San Bernardino County, on BLM lands, within the CV-MSHCP and WR-MSHCP areas (regardless of SCE's PSE status), and is recommended within Morongo Tribal Lands.

Impact WIL-3: Transmission lines would present a collision or electrocution hazard to birds, including special-status birds

Raptors, ravens, and other large birds often perch and nest on tall structures, including electrical transmission towers and poles. Golden eagles, peregrine falcons, and other large raptors are most susceptible to electrocution on transmission structures because of their size, distribution, and behavior (APLIC, 1996; APLIC, 2006). Electrocution occurs when a bird simultaneously contacts two energized phase conductors or an energized conductor and grounded hardware. This happens most frequently when a large bird attempts to perch on a transmission structure with insufficient clearance between these elements. Consequently, the design characteristics of transmission structures are a major factor in bird electrocutions (APLIC, 1996). 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).

Bird collisions with powerlines 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). 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 (e.g., ducks) collide with powerlines (APLIC, 1994), particularly during nocturnal migrations or poor weather conditions (Avery et al., 1978). However, passerines and waterfowl may have a lower potential for collisions than larger birds, such as raptors, due to behavioral factors. 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 static lines, 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 and these data are not available. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest, such as along migratory pathways, along waterways, or over agricultural areas.

The Proposed Project would upgrade and replace existing facilities (e.g., transmission structures and conductors) without adding to the overall numbers of towers or conductors. The project would not introduce new transmission facilities into location where none existed previously. Therefore, collision and electrocution hazard conditions for the project are expected to be similar to existing conditions.

The PEA states that all transmission facilities for the project would be designed to be avian-safe, following the intent of *Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006* (APLIC, 2006); and all transmission facilities would be evaluated for potential collision risk and, where determined to be high risk, lines would be marked with collision reduction devices in accordance with *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC, 2012). However, these specifications are not incorporated into an APM. Mitigation Measure WIL-3a (Evaluate bird collision risk and implement APLIC design guidelines) is identified to ensure that risk of collision and electrocution are minimized to the greatest extent feasible.

Mitigation Measure for Impact WIL-3: Transmission lines would present a collision or electrocution hazard to birds, including special-status birds

WIL-3a Evaluate bird collision risk and implement APLIC design guidelines. SCE shall adhere to recommendations published by APLIC (2012, *Reducing Avian Collisions with Power Lines: The State of the Art in 2012*).

Impact WIL-4: Project activities and facilities could cause adverse effects to habitat linkages or wildlife movement corridors

As discussed under Section D.5.1.1, movement and dispersal corridors (essential connectivity areas) that connect large blocks of habitat (natural landscape blocks) are essential to the long-term viability of plant and wildlife populations. The western part of the Proposed Project route is within the Badlands area. The Badlands is a natural landscape block with ecological connectivity with the San Jacinto Mountains, San Jacinto Wildlife Area, Lake Perris State Recreation Area, and Box Springs Mountain Park and reserve, and potential limited connection to the San Bernardino Mountains. The San Gorgonio Pass is an essential connectivity area between the San Jacinto and San Bernardino Mountains. Terrestrial movement across the pass is obstructed by land uses and linear transportation corridors, but the pass is an important corridor for migrating birds. Existing transmission lines, wind turbines, and other structures currently exist throughout the San Gorgonio Pass area. The east-west alignment of the Proposed Project reduces its impact somewhat because it is parallel to the typical flight pattern through the San Gorgonio Pass. East of Banning, the project route crosses generally open areas, where extensive wildlife movement habitat is interrupted by linear transportation corridors.

Construction activities would result in localized short-term hindrance of movement by resident or migratory wildlife due to temporary noise, lighting, dust, and human activity in the work area. In the Proposed Project Area, such movement is, in most cases, associated with daily activities involving reproduction, foraging for food, and sheltering. Construction would not interfere substantially with the long-term movement of any native resident or migratory species because impacts would be temporary and localized to different work areas within the Proposed Project study area for the duration of construction. Helicopter work would generally be short-term and localized, and naturally avoided by birds and local wildlife.

Native resident or migratory fish are not known to occur within the project area, but some fish species may occur in San Timoteo Creek or Whitewater River, both of which are perennially flowing waterways within the project ROW. No project facilities or activities would cause blockages to fish passage in these streams.

Normal operation and maintenance of the lines are performed from existing access roads with no surface disturbance. Repairs to existing facilities, such as repairing or replacing existing poles and structures, could occur in undisturbed areas. The operation of the Proposed Project is not expected to interfere with the long-term movement of any native resident or migratory species.

The Proposed Project involves the upgrade and replacement of existing facilities (e.g., structures, access roads, existing substation modifications, and staging areas); therefore, ecological connectivity conditions for the Proposed Project would be similar to existing conditions. Because the project would not cause increased barriers or hindrances to wildlife movement, no mitigation is recommended.

D.5.3.4 Impacts of Connected Actions

This section identifies and describes the expected impacts to wildlife resources of the solar projects identified as connected actions. This impact analysis is based on the wildlife resources described in the Environmental Setting for Connected Actions (Section D.5.1.3) and on the Descriptions of Connected Projects (Section B.7.2). Each connected project would be subject to review, approval, and mitigation under CEQA, NEPA, or both (depending on specific location and jurisdiction).

Impact WIL-1: Noise, lighting, vehicle traffic on access roads, and other project-related disturbance during construction, operations, and maintenance would affect wildlife including nesting birds, eggs, or chicks occupying surrounding vegetation and habitat, and could cause territory abandonment, behavioral changes, wildlife injury, or mortality

Each of the solar projects would disturb and displace wildlife on the project sites, ranging in size from approximately 400 to 4,000 acres. Project-specific effects to wildlife would depend on existing vegetation and habitat, and wildlife occurring there. In general, these effects would be similar to the effects of Impact WIL-1 as described for the Proposed Project, except that they would occur primarily within large contiguous properties, and partially along linear project features. By contrast, the bulk of the Proposed Project's impacts are along a linear ROW.

Desert Center Area. The Palen, Desert Harvest, and two other solar projects located in the Desert Center area would be likely to affect a suite of wildlife species similar to those occurring in the easternmost segment of the Proposed Project (Segment 6). The Palen and Desert Harvest environmental documents identify mitigation measures to minimize and mitigate wildlife disturbance and displacement. The confidential projects' impacts can be minimized or avoided by implementing a series of measures to minimize and mitigate impacts, such as biological monitoring and reporting, worker training, offset for habitat loss, and wildlife specific measures similar to Mitigation Measures WIL-1a, WIL-1b, and WIL-1c identified in this document.

Blythe Area. The confidential projects located in the Blythe area are could be located on natural desert habitat, or on active or disused agricultural lands. Natural uplands would support desert wildlife similar to that discussed for the Desert Center area. Floodplain and wetland areas are likely to support a large variety of migratory and nesting birds. During winter, many birds may rest or feed in agricultural lands. These impacts can be minimized or avoided by implementing a series of measures to minimize and mitigate impacts, such as biological monitoring and reporting, worker training, offset for habitat loss, and wildlife specific measures similar to Mitigation Measures WIL-1a, WIL-1b, and WIL-1c identified in this document.

Impact WIL-2: Construction, restoration, operations, and maintenance activities could cause direct or indirect loss of listed and special-status wildlife and direct or indirect effects to habitat for listed and special-status wildlife

Depending on their locations, any of the solar projects could result in the take of listed threatened or endangered wildlife species, in particular desert tortoise. Where there is potential for take of listed species, each project would be subject to conformance with CESA and ESA. In addition, any of the projects could cause loss or other adverse impacts to non-listed special-status species, such as golden eagle, burrowing owl, and desert kit fox.

Desert Center Area. The Palen, Desert Harvest, and two other projects located in the Desert Center area likely would affect desert tortoise and possibly other listed or special-status wildlife species, as described in the Palen and Desert Harvest projects' environmental documents (CEC, 2010, Section VI.A; BLM, 2012,

Section 4.4). These impacts can be minimized or mitigated by implementing a series of measures described above (Impact WIL-2 in Section D.5.3.3) as well as species-specific field surveys, avoidance, and (for listed species) agency consultation. Mitigation measures identified in the Palen and Desert Harvest projects' environmental documents (CEC, 2010, Section VI.A; BLM, 2012, Section 4.4) include conducting pre-construction surveys, monitoring, and avoidance of special-status wildlife. Similarly, the other two solar projects' impacts can be minimized or avoided by conducting species-specific surveys for each special-status wildlife species potentially occurring on the sites. These measures would be similar to Mitigation Measures WIL-2a through WIL-2k specified in Section D.5.3.3. All 4 projects must obtain incidental take authorization from the USFWS, CDFW, or both for any potential take of federally or state listed threatened or endangered wildlife (e.g., desert tortoise). Federal incidental take authorization would require mitigation or conservation measures to avoid jeopardizing the listed species, while state authorization would require that adverse impacts to the listed species are "fully mitigated." Impacts to golden eagles, if any, may be mitigated through a project-specific Eagle Conservation Plan, in coordination with the USFWS. Operational impacts to birds, including special-status birds, are addressed below, under Impact WIL-3.

Blythe Area. The solar projects located in the Blythe area could affect desert tortoise and possibly other listed or special-status wildlife species, depending on the project locations. These impacts can be minimized or mitigated by implementing a series of measures described above (Impact WIL-2 in Section D.5.3.3) as well as species-specific field surveys, avoidance, and (for listed species) agency consultation. The confidential projects' impacts can be minimized or avoided by conducting species-specific surveys for each special-status wildlife species potentially occurring on the sites, comparable to Mitigation Measures WIL-2a through WIL-2k specified in Section D.5.3.3. The confidential projects must obtain incidental take authorization from the USFWS, CDFW, or both for any potential take of federally or state listed threatened or endangered wildlife (e.g., desert tortoise). Federal incidental take authorization would require mitigation or conservation measures to avoid jeopardizing the listed species, while state authorization would require that adverse impacts to the listed species are "fully mitigated." Impacts to golden eagles, if any, may be mitigated through a project-specific Eagle Conservation Plan, in coordination with the USFWS. Operational impacts to birds, including special-status birds, are addressed below, under Impact WIL-3.

Impact WIL-3: Transmission lines would present a collision, electrocution, or solar flux hazards to birds, including special-status birds

For purposes of the analysis of connected solar project, this impact has been re-defined to include solar panels and solar troughs. Photovoltaic solar panels and solar trough technologies pose risks of injury or death to birds and other flying wildlife (bats and insects). This discussion focuses primarily on birds but also may apply in part to bats and insects. Birds or other wildlife may collide with solar panels or mirrors, or the transmission lines (generator tie-lines, or gen-ties) linking generators to the larger transmission system. Large birds may suffer electrocution by contacting energized conductors or hardware on project facilities.

Gen-tie line collision and electrocution hazards. Each solar project would include a gen-tie line to deliver electrical power from the solar plant to the regional transmission system. Hazards posed by these gen-tie lines include wildlife collision and possible electrocution hazards as described for the Proposed Project under Impact WIL-3. The gen-tie collision hazard is similar to the transmission line collision hazard described in Section D.5.3.4, and is dependent on the location and length of each gen-tie line. If there is an important collision hazard, it can be mitigated by installing "bird diverters" to increase line visibility. In some cases collision hazard may be more substantial, due to length of the gen-tie line or proximity to important habitat areas such as wetlands. If so, addition mitigation may be appropriate, such as habitat

creation or restoration, to increase nesting habitat or other resources for birds and thus offset the collision-related bird mortality.

The majority of raptor electrocutions are caused by distribution and subtransmission lines, energized at less than 69 kV, and the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low (APLIC, 1996). In part, this is because higher voltage lines are farther apart, making simultaneous contact of two conductors less likely. As an upgrade project within an existing transmission corridor, the Proposed Project would not result in a new collision hazard beyond the environmental baseline. However, the gen-tie lines for each solar project are likely to be new structures, rather than replacements. The electrocution hazard can be avoided or mitigated by implementing APLIC design standards so that energized components are separated far enough to prevent electrocution, as described in the DHSP FEIR (BLM, 2012, Section 4.4) and the Palen Presiding Member's Proposed Decision (CEC, 2010, Section VI.A.).

Panel and solar trough collision hazards. Large-scale solar facilities present a relatively new and un-researched potential risk for bird collisions. To a bird, PV panels or mirrored troughs at solar concentrators may mimic the reflective and light polarizing characteristics of water. Birds may mistake fields of PV panels or troughs as water bodies, and may be attracted to them. This potential phenomenon is referred to as the "lake effect." When flying above a solar facility, birds may attempt to land on what they perceive as water, and instead collide with PV panels or other structures, resulting in injury or death. If birds successfully land within a solar facility, some water or wetland birds may not have sufficient open space or water surface to take off again. Other forms of distress may also occur (e.g., exhaustion after depleting energy reserves to fly to the perceived water body). Much of what is known about collision risk or lake effect at solar PV facilities originates from preliminary monitoring data from the Desert Sunlight Solar Farm, a PV project located in the Desert Center area. There is evidence of this lake effect at the Desert Sunlight project (National Fish and Wildlife Forensics Laboratory, 2014), where several birds that are normally associated with lakes or similar open water, including special-status species, have been found either dead or injured on the site. A federally endangered species, the Yuma clapper rail, was among the recorded mortalities.

This information was taken into account in Riverside County's CEQA review of the McCoy and Desert Harvest Solar Projects (Riverside County, 2013). For the McCoy Solar Project, a 750 MW solar PV project located on about 8,200 acres in the Blythe area, Riverside County imposed mitigation to include a robust monitoring program for bird mortality, as well as an adaptive management program to restore bird habitat to offset the project's impacts, should the monitoring program detect excessive bird mortality. As understanding of the lake effect and other risks of solar PV technology improves, impacts assessment and mitigation strategies of future projects may become less reliant on future monitoring and adaptive management.

Desert Center Area. The connected actions in the Desert Center area include three solar PV projects (the 150 MW Desert Harvest project and two confidential projects of 50 and 250 MW) and the Palen Project, using solar trough technology.

The electrocution and collision hazards of the Desert Harvest and Palen gen-tie lines were evaluated in their respective environmental documents (BLM, 2012, Section 4.4; CEC, 2010, Section I.A.). These impacts would be mitigated through habitat set-aside and design features to minimize risk. For the two other solar PV projects, gen-tie lines can present both an electrocution and a collision hazard. If project design presents an electrocution hazard, this impact can be mitigated by implementing APLIC design standards so that energized components are separated far enough to prevent electrocution. Depending on their locations, the gen-tie lines may present collision hazards. In addition, the projects' fields of solar panels or troughs could present collision or lake effect hazards to birds. Gen-tie collision and lake-effect

mortality could both be mitigated through a robust monitoring program and adaptive measures to offset bird mortality through habitat restoration off-site, patterned after the McCoy Solar Project's mitigation (County of Riverside, 2013).

Blythe Area. The locations of the solar PV projects in the Blythe area are unknown. As PV projects, they would not present a solar flux hazard to birds. The lengths and locations of their gen-tie lines are unknown. As 150 and 224 MW projects, the gen-tie lines are expected to present minimal electrocution hazard but, depending on their locations, they may present a collision hazard. If project design presents an electrocution hazard, this impact likely would be mitigated by implementing APLIC design standards so that energized components are separated far enough to prevent electrocution. In addition, the projects' solar fields could present collision or lake effect hazards to birds.

The Blythe area is nearer the Colorado River than the Desert Center area. The area provides large expanses of floodplain, wetland, and agricultural habitats. It is an important migratory route for numerous birds, as well as a breeding and wintering stopover destination. The large numbers of birds and proximity to important habitat areas may increase the gen-tie line collision hazard in the Blythe area by comparison with the other areas, because large numbers of birds may fly near gen-tie lines as they approach breeding and wintering habitats. Conversely, the availability of significant open water and wetland habitat in the Blythe area may reduce the lake effect hazard because fewer birds would mistake the PV solar fields for open water given that they have alternate suitable water habitat close by.

Gen-tie collision and lake effect mortality are expected to be mitigated through a robust monitoring program and adaptive measures to offset bird mortality through habitat restoration off-site, patterned after the McCoy Solar Project's mitigation (County of Riverside, 2013).

Impact WIL-4: Project activities and facilities could cause adverse effects to habitat linkages or wildlife movement corridors

Desert Center Area. The USFWS has identified the upper Chuckwalla Valley, within the Desert Center area, as important to biological connectivity and gene flow among desert tortoise populations located to the north and south. Linear barriers to movement include the I-10 Freeway and the Colorado River Aqueduct. In addition, scattered agricultural and residential land uses further limit the ability of desert tortoises to move from north to south across the valley. For the DHSP, adverse impacts to wildlife movement would be mitigated through set-aside and long-term management of open space lands in the "I-10 corridor" between Chiriaco Summit and Desert Center. The details of these land acquisitions are set forth in Mitigation Measure VEG-6 of the DHSP EIS (BLM, 2012).

The CEC's (2010, Section VI.A) analysis of the Palen project concluded that the project and alternatives 2 and 3 could result in the potential disruption of connectivity corridors between tortoise Critical Habitat Units located north and south of I-10. The Palen Project's impacts to wildlife movement would be further mitigated through habitat set-aside and management, as specified in CEC's Condition of Certification BIO-12 (CEC, 2014, Section VI.A.)

Depending on their locations, the other two solar projects in the Desert Center area could further restrict desert tortoise movement through the upper Chuckwalla Valley, or they could have relatively minor effects on wildlife movement. Projects on disused agricultural land, or in the broad valleys and bajadas to the east of Desert Center, are unlikely to substantially restrict wildlife movement. However, projects that located in the in the "I-10 corridor" between Chiriaco Summit and Desert Center could further reduce the ability for wildlife, including desert tortoise, to move north and south between the Colorado Desert and Joshua Tree National Park. In the DHSP and Palen Projects, habitat set-asides and management would

mitigate project effects to wildlife movement. For the DHSP, the terms of the set aside conditions were developed to specify compensation habitat within the wildlife connectivity area of concern to USFWS biologists. If the other two solar projects would have important impacts to wildlife movement, then similar project-specific conditions may be developed to mitigate those impacts.

Blythe Area. Potential impacts to wildlife movement in the Blythe area depend on the locations of the solar projects. Use of existing or disused agricultural lands in and around Blythe would not likely have important effects on wildlife movement, because the terrestrial wildlife species that may depend on local movement routes or linkages are unlikely to use those disturbed agricultural areas, even without project development. Alternately, projects sited on natural open space could have more substantial impacts to wildlife movement. The Palo Verde Mesa, south of Blythe, is an extensive intact landscape with ample wildlife movement opportunities throughout the area. Large-scale land use conversion by solar project development in this area would likely limit or restrict wildlife movement, but could be mitigated through long-term set-asides and management of comparable open space within the same region. The region north of Blythe, including McCoy Wash, is probably more susceptible to habitat fragmentation from several large-scale renewable energy projects. Projects in that region, depending on their locations, could cause impacts to important areas for wildlife movement and biological connectivity. However, for most potential project sites, these impacts could be mitigated through habitat set-aside and management, with the compensation acreage specifically selected to conserve wildlife movement habitat.

D.5.4 Environmental Impacts of Project Alternatives

Three alternatives are considered in this section. These alternatives would be located within the existing WOD ROW. Alternatives are described in detail in Appendix 5 (Alternatives Screening Report) and are summarized in Section C. The No Action Alternative is evaluated in Section D.5.5.

Wildlife resources that occur in or have the potential to occur in the ROW are described by segment in Section D.5.1.2 above. The description of the environmental setting would apply equally to the alternatives. Several of the impacts to vegetation (discussed in Section D.4 Biological Resources - Vegetation) also apply to wildlife resources. This is especially true of habitat-related impacts, such as vegetation removal. In addition, several of the mitigation measures for vegetation resources identified in Section D.4.3.3 also serve to mitigate wildlife resources impacts. These impacts and mitigation measures are listed in Section D.5.3.3.1. Please refer to Section D.4.3.3 for the analysis and full text of each mitigation measure for vegetation (“VEG”). Analyses of vegetation and habitat impacts for the Tower Relocation, Iowa Street 66 kV Underground, and Phased Build alternatives are presented in Sections D.4.4.1, D.4.4.2, and D.4.4.3, respectively.

D.5.4.1 Tower Relocation Alternative

The Tower Relocation Alternative would locate certain transmission structures in Segments 4, 5, and 6 farther from existing homes than would be the case under the Proposed Project.

Four impacts related to wildlife resources were identified for the Proposed Project. These impacts also would apply to the Tower Relocation Alternative, which overall would be the same as the Proposed Project, with the exception of the relocated transmission towers that are described above and in Appendix 5. The full text of all wildlife mitigation measures (“WIL”) referenced in this section is presented in Section D.5.3.3.

With the exception of the relocated structures in Segments 4, 5, and 6, the Proposed Project, when incorporating this alternative, would include the same structures that would be constructed under the Proposed Project. In general, the relocated towers would be moved approximately 50 feet farther from the southern edge of the ROW.

Impact WIL-1: Noise, lighting, vehicle traffic on access roads, and other project-related disturbance during construction, operations, and maintenance would affect wildlife including nesting birds, eggs, or chicks occupying surrounding vegetation and habitat, and could cause territory abandonment, behavioral changes, wildlife injury, or mortality

Direct impacts have an immediate causal link in time and location to an action creating the impact. Indirect impacts are caused by the project, but can occur later in time or at a distance from the project. Examples of direct effects to wildlife are disturbance from noise and vibration, lighting, dust, and vehicle traffic; loss or degradation of habitat; destruction of burrows or nests; and mortality of individuals. Indirect effects include introduction and spread of invasive species that may cause habitat degradation or reduction of available food sources and increased predation.

Under the Tower Relocation Alternative, the minor adjustment to the location of certain towers would not increase the amount of project-related disturbance compared to the Proposed Project, but the longer construction timeframe under this alternative would extend the duration of project-related disturbances during construction. With the exception of the extended construction timeframe, the impacts of the Tower Relocation Alternative, compared to existing conditions, would be similar to the Proposed Project as analyzed in Section D.5.3.3.

Future O&M would be similar to current O&M activities on the existing lines, including temporary impacts for road maintenance. These activities may include road or facilities site maintenance, transmission structure or conductor repairs, and similar activities. With the Tower Relocation Alternative implemented in Segments 4, 5, and 6, O&M effects to wildlife would be similar to existing conditions.

The impacts on wildlife due to project-related disturbance would be reduced through implementation of Mitigation Measures VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and implement worker environmental awareness program [WEAP]), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habitat loss), VEG-2a (Prepare and implement an integrated weed management plan), WIL-1a (Conduct pre-construction biological resources surveys), WIL-1b (Ensure wildlife impact avoidance and minimization), and WIL-1c (Prepare and implement a Nesting Bird Management Plan). With implementation of these mitigation measures, the impacts associated with the Tower Relocation Alternative, as compared to the Proposed Project, would be minimized.

Impact WIL-2: Construction, restoration, operations, and maintenance activities could cause direct or indirect loss of listed and special-status wildlife and direct or indirect effects to habitat for listed and special-status wildlife

The expected direct and indirect impacts to special-status wildlife during construction, restoration, and O&M phases under the Tower Relocation Alternative would be similar to the impacts described in Impact WIL-1.

Under the Tower Relocation Alternative, the minor adjustment to the location of some towers is not expected to increase the amount of direct and indirect loss of listed and special-status wildlife and habitat compared to the Proposed Project. The longer construction timeframe would increase the potential for direct and indirect loss of listed and special-status wildlife during the construction phase. The affected sections of the ROW are in or adjacent to suburban areas. No listed wildlife species were documented in these areas surveys. Special-status wildlife species found in or near the affected sections were burrowing owl, San Diego pocket mouse, ferruginous hawk (migrant), and Los Angeles pocket mouse (SCE, 2013).

With the exception of the extended construction timeframe, the impacts of the Tower Relocation Alternative would be similar to the Proposed Project as analyzed in Section D.5.3.3.

The impacts on listed and special-status wildlife and habitat would be reduced through implementation of Mitigation Measures VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and implement worker environmental awareness program), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habitat loss), VEG-2a (Prepare and implement an integrated weed management plan), WIL-1a (Conduct pre-construction biological resources surveys), WIL-1b (Ensure wildlife impact avoidance and minimization), WIL-1c (Prepare and implement a Nesting Bird Management Plan), WIL-2a (Conduct desert tortoise surveys, monitoring, and avoidance), WIL-2b (Prepare and implement raven monitoring, management, and control plan), WIL-2c (Conduct surveys and avoidance for threatened or endangered riparian birds), WIL-2d (Conduct surveys and avoidance for Stephens' kangaroo rat), WIL-2e (Conduct surveys and avoidance for coastal California gnatcatcher), WIL-2f (Conduct surveys and avoidance for golden eagle), WIL-2g (Conduct surveys and avoidance for burrowing owl), WIL-2h (Conduct surveys and avoidance for special-status herpetofauna), WIL-2i (Conduct surveys and avoidance for bats), WIL-2j (Conduct surveys and avoidance for special-status small mammals), and WIL-2k (Conduct surveys and avoidance for American badger, ringtail, and desert kit fox). Additional mitigation measures protecting air quality (Section D.3.3.3) and water resources (Section D.19.3.3) would minimize the potential for any impacts to drainages within critical habitat areas.

Impact WIL-3: Transmission lines would present a collision or electrocution hazard to birds, including special-status birds

Raptors, ravens, and other large birds often perch and nest on tall structures, including electrical transmission towers and poles. Golden eagles, peregrine falcons, and other large raptors are most susceptible to electrocution on transmission structures because of their size, distribution, and behavior (APLIC, 1996; APLIC, 2006). Electrocution occurs when a bird simultaneously contacts two energized phase conductors or an energized conductor and grounded hardware. This happens most frequently when a large bird attempts to perch on a transmission structure with insufficient clearance between these elements. Consequently, the design characteristics of transmission structures are a major factor in bird electrocutions (APLIC, 1996). 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 because of the wider spacing of higher voltage conductors (APLIC, 1996).

Under the Tower Relocation Alternative, the minor adjustment to the location of the affected towers would have no different effect on the collision or electrocution hazard to birds that would result the Proposed Project. The collision or electrocution hazard to birds would be reduced through implementation of Mitigation Measure WIL-3a (Evaluate bird collision risk and implement APLIC design guidelines).

Impact WIL-4: Project activities and facilities could cause adverse effects to habitat linkages or wildlife movement corridors

Movement and dispersal corridors (essential connectivity areas) that connect large blocks of habitat (i.e., large areas of natural landscape) are essential to the long-term viability of plant and wildlife populations. Construction activities would result in localized short-term hindrance of movement by resident or migratory wildlife due to temporary noise, lighting, dust, and human activity in the work area. In the Proposed Project Area, such movement is, in most cases, associated with daily activities involving reproduction, foraging for food, and sheltering. Construction would not interfere substantially with the long-term movement of any native resident or migratory species because impacts would be temporary and localized to

different work areas within the Proposed Project study area for the duration of construction. Helicopter work would generally be short-term and localized, and naturally avoided by birds and local wildlife.

The Tower Relocation Alternative would move the proposed position of certain towers, but would not increase the number of towers or the amount of land that would be disturbed.

The Proposed Project, with the alternative, involves the upgrade and replacement of existing facilities. Ecological connectivity after construction would be similar to already existing conditions. Because the Proposed Project would not increase barriers or hindrances to wildlife movement, no mitigation is recommended. Under the Tower Relocation Alternative, the minor adjustment to the location of some towers would not increase the adverse effects on wildlife movement compared to the Proposed Project or existing condition. The extended construction timeframe would potentially result in additional localized short-term hindrance of movement by resident or migratory wildlife. This would affect several relatively short sections of the ROW (see Section 4.2) for up to a year. Construction would be phased, with extended periods of inactivity between active phases at individual sites. This would also reduce any effects on wildlife movement, as compared to a long, continuous period of activity at a site.

D.5.4.2 Iowa Street 66 kV Underground Alternative

The Iowa Street 66 kV Underground Alternative would place a 1,600-foot segment of the Proposed Project's subtransmission line underground, rather than overhead.

Four impacts related to wildlife resources were identified for the Proposed Project. These impacts also would apply to the Iowa Street 66 kV Underground Alternative. With the exception of the underground portion of the subtransmission line that is described above and in Appendix 5, the overall project would be the same as the Proposed Project. The full text of all wildlife mitigation measures ("WIL") referenced in this section is presented in Section D.5.3.3.

Impact WIL-1: Noise, lighting, vehicle traffic on access roads, and other project-related disturbance during construction, operations, and maintenance would affect wildlife including nesting birds, eggs, or chicks occupying surrounding vegetation and habitat, and could cause territory abandonment, behavioral changes, wildlife injury, or mortality

Direct impacts have an immediate causal link in time and location to an action creating the impact. Indirect impacts are caused by the project, but can occur later in time or at a distance from the project. Examples of direct effects to wildlife are disturbance from noise and vibration, lighting, dust, and vehicle traffic; loss or degradation of habitat; destruction of burrows or nests; and mortality of individuals. Indirect effects include introduction and spread of invasive species that may cause habitat degradation or reduction of available food sources and increased predation.

The section of subtransmission line affected under this alternative is in a suburban area. Any effects on wildlife would be minimal, as the construction activity would be primarily in the street. After construction there would be no adverse effect on wildlife from the buried line.

The Iowa Street 66 kV Underground Alternative would create additional ground disturbance and construction-related traffic and noise during the construction phase, as compared to the equivalent Proposed Project segment. The installation of an underground line would also require more time to construct than an equivalent length of overhead line. This would affect a 1,600-foot segment of the ROW running along a paved street through an area characterized by a mix of residential and commercial development, agriculture, and vacant land (see Ap.5-4).

The impacts on wildlife due to project-related disturbance would be reduced through implementation of Mitigation Measures VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and implement worker environmental awareness program), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habitat loss), VEG-2a (Prepare and implement an integrated weed management plan), WIL-1a (Conduct pre-construction biological resources surveys), WIL-1b (Ensure wildlife impact avoidance and minimization), and WIL-1c (Prepare and implement a Nesting Bird Management Plan). With implementation of these mitigation measures, the impacts associated with the Iowa Street 66 kV Underground Alternative would be minimized.

Impact WIL-2: Construction, restoration, operations, and maintenance activities could cause direct or indirect loss of listed and special-status wildlife and direct or indirect effects to habitat for listed and special-status wildlife

The expected direct and indirect impacts to special-status wildlife during construction, restoration, and O&M phases under the Iowa Street 66 kV Underground Alternative would be similar to the impacts described in Impact WIL-1.

Construction of the Iowa Street 66 kV Underground Alternative would create additional ground disturbance and construction-related traffic and noise, as compared to the Proposed Project. The underground line would also require more time to construct than an equivalent length of overhead line. This would affect a 1,600-foot segment of the ROW running along a paved street through an area characterized by a mix of residential and commercial development, agriculture, and vacant land (see Figure Ap.5-4 in Appendix 5). No listed or special-status wildlife species were documented in this portion of the ROW during surveys, and habitat in this area is categorized as developed/disturbed (SCE, 2013).

If pre-construction surveys identified any unanticipated special status wildlife in the vicinity of this underground segment, the impacts on listed and special-status wildlife and habitat would be reduced through implementation of Mitigation Measures VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and implement worker environmental awareness program), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habitat loss), VEG-2a (Prepare and implement an integrated weed management plan), WIL-1a (Conduct pre-construction biological resources surveys), WIL-1b (Ensure wildlife impact avoidance and minimization), WIL-1c (Prepare and implement a Nesting Bird Management Plan), WIL-2a (Conduct desert tortoise surveys, monitoring, and avoidance), WIL-2b (Prepare and implement raven monitoring, management, and control plan), WIL-2c (Conduct surveys and avoidance for threatened or endangered riparian birds), WIL-2d (Conduct surveys and avoidance for Stephens' kangaroo rat), WIL-2e (Conduct surveys and avoidance for coastal California gnatcatcher), WIL-2f (Conduct surveys and avoidance for golden eagle), WIL-2g (Conduct surveys and avoidance for burrowing owl), WIL-2h (Conduct surveys and avoidance for special-status herpetofauna), WIL-2i (Conduct surveys and avoidance for bats), WIL-2j (Conduct surveys and avoidance for special-status small mammals), and WIL-2k (Conduct surveys and avoidance for American badger, ringtail, and desert kit fox). Additional mitigation measures protecting air quality (Section D.3.3.3) and water resources (Section D.19.3.3) would minimize the potential for any impacts to drainages within critical habitat areas.

Impact WIL-3: Transmission lines would present a collision or electrocution hazard to birds, including special-status birds

The Iowa Street 66 kV Underground Alternative would result in a reduced potential for the collision and electrocution hazard to birds compared to the Proposed Project, because 1,600 feet of proposed overhead line would be moved underground. No mitigation related to collision risk would be required for this alternative segment.

Impact WIL-4: Project activities and facilities could cause adverse effects to habitat linkages or wildlife movement corridors

Movement and dispersal corridors (essential connectivity areas) that connect large blocks of habitat (i.e., large areas of natural landscape) are essential to the long-term viability of plant and wildlife populations. The area of this alternative does not include large blocks of habitat and does not provide movement and dispersal corridors. The area is a mix of residential and commercial development, agriculture, and vacant land.

Under the Iowa Street 66 kV Underground Alternative, there would be additional ground disturbance and construction-related traffic and noise, as compared to the Proposed Project. The installation of an underground line would also require more time to construct than an equivalent length of overhead line. The additional construction disturbance and extended construction timeframe would result in additional localized short-term hindrance of movement by resident or migratory wildlife. This would affect a 1,600-foot segment of ROW running along a paved street through an area characterized by a mix of residential and commercial development, agriculture, and vacant land (see Ap.5-4).

D.5.4.3 Phased Build Alternative

The Phased Build Alternative would retain existing double-circuit 220 kV transmission structures to the extent feasible, remove single-circuit structures, add new double 220 circuit structures, and string all structures with higher-capacity conductors.

Four impacts related to wildlife resources were identified for the Proposed Project. These impacts also would apply to the Phased Build Alternative. The full text of all wildlife mitigation measures (“WIL”) referenced in this section is presented in Section D.5.3.3. This analysis builds on the discussion of this alternative in Section D.4.3.3, Vegetation. The following additional impacts are analyzed for wildlife resources.

Impact WIL-1: Noise, lighting, vehicle traffic on access roads, and other project-related disturbance during construction, operations, and maintenance would affect wildlife including nesting birds, eggs, or chicks occupying surrounding vegetation and habitat, and could cause territory abandonment, behavioral changes, wildlife injury, or mortality

Direct impacts are those impacts that result from the project and occur at the same time and place. Indirect impacts are caused by the project, but can occur later in time or farther removed in distance and are still reasonably foreseeable and related to the operation of the project. Examples of direct effects to wildlife are disturbance from noise and vibration, lighting, dust, and vehicle traffic; loss or degradation of habitat; destruction of burrows or nests; and mortality of individuals. Indirect effects include introduction and spread of invasive species that may compete with native species and cause habitat degradation or reduction of available food sources and increased predation due to certain habitat alterations.

Vegetation removal would cause temporary or permanent loss of wildlife habitat along with the displacement and potential mortality of resident wildlife species that are poor dispersers, such as snakes, lizards,

and small mammals. Construction could also result in the temporary degradation of adjacent habitat value due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. Soil disturbance, weed removal, site clearing, or site preparation during the restoration or O&M project phases also could cause temporary habitat degradation or wildlife disturbance.

Direct loss of small mammals, reptiles, and other less mobile species could occur during each phase of the Proposed Project. This loss would result primarily from the use of construction vehicles and the grading of laydown areas for tower or pole erection. Fossorial species (burrowing animals) may be harmed through the crushing of burrows, the loss of refugia, and direct mortality from construction activities. Construction could also result in an increase in accidental road kills due to increased vehicle traffic along the construction corridor. Diurnally active reptiles and mammals are the most likely to be subject to mortality from construction vehicles. Other potential causes of wildlife mortality or injury include entrapment in trenches, pipes, or other supplies and equipment; drowning in stored water; or poisoning by ingestion or exposure to stored or spilled chemicals.

More mobile species such as birds and larger mammals are expected to disperse into adjacent habitat areas during the land clearing and grading phases associated with construction. They would be at increased risk of predation as they flush from cover during site clearing. After leaving their home territories, displaced animals may be unable to find suitable food or cover in new, unfamiliar areas. They may find themselves within the occupied territory of another individual of the same or similar species, leading to competition for resources. These adverse displacement effects would apply to common wildlife species and to special-status species.

Noise and vibration, dust, visual disturbance from increased human activity, and exhaust emissions from heavy equipment during construction could cause wildlife to avoid habitats adjacent to the construction sites. Construction could impact wildlife in adjacent habitats by interfering with breeding or foraging activities, altering movement patterns, or causing animals to temporarily avoid areas adjacent to the construction zone. Nocturnally active wildlife would tend to be affected less by construction than would diurnally active species. Wildlife species are most vulnerable to construction-related disturbances during their breeding seasons. Disturbances from construction could result in nest, roost, or territory abandonment and subsequent reproductive failure if these disturbances were to occur during an affected species' breeding season.

Wildlife "subsidies" such as food or water, could attract wildlife to the project area where they may be at increased risk of road strike or other injury or mortality. In addition, wildlife subsidies may attract predators such as ravens, coyotes, or feral dogs to the project area, where they may prey on other species, including special-status species. Pet animals, particularly dogs, may harass or injure wildlife in the project vicinity, or introduce illness such as canine distemper into native wildlife populations.

Vegetation removal and construction disturbance can also introduce or increase the spread of non-native plant species, causing wildlife habitat degradation.

Displacement or mortality of fully protected species or protected furbearers, regardless of other conservation status, may violate state and federal regulations. Birds, nests, and nestlings are generally protected under the Migratory Bird Treaty Act and California Fish and Game Code, regardless of other conservation designations. Thus, displacement or mortality of nesting birds (including eggs or nestlings), fully protected species, or protected furbearers, regardless of other conservation status designations, may violate state and federal regulations.

Nesting birds may be found throughout the Proposed Project area, including native vegetation, landscaped areas, open areas on the ground, existing transmission structures, and construction vehicles or

equipment left inactive for short periods (e.g., a few days). Many project activities could remove nests or cause the displacement of breeding birds and the abandonment of active nests, either within work areas or in adjacent habitat (including transmission line structures). For some special-status bird species, the CV-MSHCP or WR-MSHCP may provide take authorization; this authorization would apply to the Proposed Project if SCE becomes a Participating Special Entity (PSE).

All future O&M would be similar to current O&M activities on the existing lines, including temporary impacts for road maintenance. These activities may include road or facilities site maintenance, transmission structure or conductor repairs, and similar activities. The Proposed Project's O&M effects to wildlife would be similar to existing conditions.

Under the Phased Build Alternative, one set of existing double-circuit towers would be retained and reconducted rather than being removed and replaced by new towers. The removal of the existing single-circuit structures and their replacement with a set of new double-circuit towers would be similar to the Proposed Project. Overall, the alternative would require less tower removal, pad preparation, and tower erection than the Proposed Project. Consequently, less disturbance of wildlife during the construction period would occur. During operations and maintenance, the Phased Build Alternative would have similar effects on wildlife as the Proposed Project because similar numbers of towers, lines, and roads would be in place.

The impacts on wildlife due to project-related disturbance under this alternative would be reduced through implementation of Mitigation Measures VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and implement worker environmental awareness program [WEAP]), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habitat loss), VEG-2a (Prepare and implement an integrated weed management plan), WIL-1a (Conduct pre-construction biological resources surveys), WIL-1b (Ensure wildlife impact avoidance and minimization), and WIL-1c (Prepare and implement a Nesting Bird Management Plan). With implementation of these mitigation measures, the impacts associated with the Phased Build Alternative would be minimized.

Impact WIL-2: Construction, restoration, operations, and maintenance activities could cause direct or indirect loss of listed and special-status wildlife and direct or indirect effects to habitat for listed and special-status wildlife

The Proposed Project's expected direct and indirect impacts to special-status wildlife during construction, restoration, and O&M phases would be similar to the impacts described in Impact WIL-1.

Listed Wildlife

Four federally or state-listed threatened or endangered animal species were documented within the project study area during surveys: desert tortoise, least Bell's vireo, Stephens' kangaroo rat, and Swainson's hawk. Four additional listed species have a moderate or high potential for occurrence: western yellow-billed cuckoo, southwestern willow flycatcher, little willow flycatcher, and coastal California gnatcatcher. (Note that Swainson's hawk, little willow flycatcher, and western yellow-billed cuckoo would occur in the Proposed Project area only during migratory seasons.) The project ROW passes through designated critical habitat for the coastal California gnatcatcher, and designated critical habitat for the southwestern willow flycatcher is located within 200 feet of the project area. Listed species with a low potential to occur are Casey's June beetle, mountain yellow-legged frog, Coachella Valley fringe-toed lizard, and bald eagle.

Take of listed species may result from project activities. If SCE obtains PSE status under the MSHCPs, take of covered species within the WR-MSHCP or CV-MSHCP may be authorized within the two MSHCP areas under existing state and federal authorizations. Regardless of MSHCP participation, the Proposed Project may affect listed species outside the MSHCP areas or on BLM land within the CV-MSHCP. ESA Section 7 Consultation would be required for the project's potential take of federally listed species, and CESA take authorization would be required for any take of state-listed species. If SCE does not obtain PSE status, these consultation or permitting requirements would also apply within the MSHCP areas.

Under the Phased Build Alternative, construction site restoration could cause loss of listed and special-status wildlife and would have adverse effects on their habitat. However, with the reduced level of construction and less ground disturbance, these impacts would be less than under the Proposed Project. During O&M, the impacts under this alternative and under the Proposed Project would be similar.

The impacts of this alternative on listed and special-status wildlife and habitat would be reduced through implementation of Mitigation Measures VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and implement worker environmental awareness program), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habitat loss), VEG-2a (Prepare and implement an Integrated Weed Management Plan), WIL-1a (Conduct pre-construction biological resources surveys), WIL-1b (Ensure wildlife impact avoidance and minimization), WIL-1c (Prepare and implement a Nesting Bird Management Plan), WIL-2a (Conduct desert tortoise surveys, monitoring, and avoidance), WIL-2b (Prepare and implement raven monitoring, management, and control plan), WIL-2c (Conduct surveys and avoidance for threatened or endangered riparian birds), WIL-2d (Conduct surveys and avoidance for Stephens' kangaroo rat), WIL-2e (Conduct surveys and avoidance for coastal California gnatcatcher), WIL-2f (Conduct surveys and avoidance for golden eagle), WIL-2g (Conduct surveys and avoidance for burrowing owl), WIL-2h (Conduct surveys and avoidance for special-status herpetofauna), WIL-2i (Conduct surveys and avoidance for bats), WIL-2j (Conduct surveys and avoidance for special-status small mammals), and WIL-2k (Conduct surveys and avoidance for American badger, ringtail, and desert kit fox). Additional mitigation measures protecting air quality (Section D.3.3.3) and water resources (Section D.19.3.3) would minimize the potential for any impacts to drainages within critical habitat areas. State and federal permitting or consultation, and MSHCP participation (if SCE obtains PSE status) may result in additional measures to mitigate the Proposed Project's impacts to listed species.

With implementation of these mitigation measures, the impacts associated with the Phased Build Alternative would be minimized.

Impact WIL-3: Transmission lines would present a collision or electrocution hazard to birds, including special-status birds

Raptors, ravens, and other large birds often perch and nest on tall structures, including electrical transmission towers and poles. Golden eagles, peregrine falcons, and other large raptors are most susceptible to electrocution on transmission structures because of their size, distribution, and behavior (APLIC, 1996; APLIC, 2006). Electrocution occurs when a bird simultaneously contacts two energized phase conductors or an energized conductor and grounded hardware. This happens most frequently when a large bird attempts to perch on a transmission structure with insufficient clearance between these elements. Consequently, the design characteristics of transmission structures are a major factor in bird electrocutions (APLIC, 1996). 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 because of the wider spacing of higher voltage conductors (APLIC, 1996).

Both the Phased Build Alternative and the Proposed Project would upgrade structures and conductors in a corridor in which multiple transmission lines already exist. Collision and electrocution hazard conditions from the project would be similar to existing conditions. The collision or electrocution hazard to birds would be reduced through implementation of Mitigation Measure WIL-3a (Evaluate bird collision risk and implement APLIC design guidelines).

The impacts of the Phased Build Alternative on collision and electrocution hazards to birds would be the same as the Proposed Project.

Impact WIL-4: Project activities and facilities could cause adverse effects to habitat linkages or wildlife movement corridors

Corridors that connect large blocks of habitat (i.e., large areas of natural landscape) and provide for movement and dispersal of species are essential to the long-term viability of plant and wildlife populations. Construction activities would result in localized short-term hindrance of movement by resident or migratory wildlife due to temporary noise, lighting, dust, and human activity in the work area. In the project ROW, such movement is, in most cases, associated with daily activities involving reproduction, foraging for food, and sheltering. Construction would not interfere substantially with the long-term movement of any native resident or migratory species because impacts would be temporary and localized to different work areas for the duration of construction. Helicopter work would generally be short-term and localized, and naturally avoided by birds and local wildlife.

Construction of the Phased Build Alternative would result in short-term hindrance of movement by resident or migratory wildlife if barriers are established, such as fencing around yards. These would be localized and wildlife could migrate around the obstructions. In the long-term, during operations the presence of new and existing towers would not interfere substantially with the movement of any native resident or migratory species. The project involves the upgrade and replacement of existing facilities, with some structures being removed and other structures installed. Therefore, ecological connectivity for the Proposed Project and for the Phased Build Alternative would be similar to existing conditions, with towers spaced along the alignment. This leaves substantial open space for wildlife movement under the lines. Because there would be no increased barriers or hindrances to wildlife movement, no mitigation is recommended.

Similarly, the Phased Build Alternative would not increase the adverse effects on wildlife movement compared to the Proposed Project. The impacts of the Phased Build Alternative would be similar to the Proposed Project as analyzed in Section D.5.3.3.

D.5.5 Environmental Impacts of No Action Alternative

D.5.5.1 No Action Alternative Option 1

The No Action Alternative Option 1 is described in Section C.6.3.1. It would consist of a new 500 kV circuit, primarily following the Devers-Valley transmission corridor and extending 26 miles between Devers Substation. It would also require a new 40-acre substation south of Beaumont, and 4 new 220 kV circuits extending 7 miles from the new Beaumont Substation to El Casco Substation, primarily following the existing El Casco 115 kV ROW. The remainder of the No Action Alternative, from El Casco Substation to the San Bernardino and Vista Substations, would be identical to the Proposed Project. Information on environmental resources and project impacts are derived for the Devers-Palo Verde 500 kV No. 2 Project EIR/EIS (CPUC and BLM, 2006) and the El Casco System Project Draft EIR (CPUC, 2007), which include nearly all of the No Action alignment.

From Devers Substation to west of Cabazon, the land is subject to the Coachella Valley MSHCP. At that point, the alignment to Beaumont Substation and on to El Casco Substation would be subject to the Western Riverside MSHCP. Sections of the alignment on federal lands would be subject to the requirements of the management agencies having jurisdiction.

Devers to Beaumont Substation. Two species of invertebrates, Coachella Valley giant sand-treader cricket and Coachella Valley Jerusalem cricket, have a high potential to occur along the route between Devers Substation and the foothills of the San Jacinto Mountains. Suitable habitat for both species, which consists of active sand dunes and ephemeral sand fields, is present in a patchy distribution in this area. Two listed species of reptiles, the desert tortoise and Coachella Valley fringe-toed lizard, have been documented near the Devers Substation and in the area just west of the substation. Two sensitive reptiles, the San Diego horned lizard and northern red diamond rattlesnake, have been observed in this in the eastern portion of the D-V corridor, and six other sensitive reptile species have a high to moderate potential to occur. Two listed species of bird, the least Bell's vireo and coastal California gnatcatcher, have a high potential to occur in habitat located in the vicinity of this alternative. Sixteen additional sensitive bird species also potentially occur because suitable habitat is present and the species has been documented in the vicinity. The endangered Stephens' kangaroo rat is known to occur in the Potrero ACEC/Conservation Unit. In fact, one of the primary conservation goals for the Potrero Conservation Unit is the preservation of a large population of Stephens' kangaroo rat. The Peninsular bighorn sheep is a federally endangered species, and has designated Critical Habitat through which the route would pass.

The direct loss of small mammals, reptiles, and other less mobile species could occur in the undeveloped areas along the alignment. The loss of vegetation would also result in the temporary loss of breeding and foraging habitat for wildlife. The removal of habitat during the bird breeding season would likely result in the displacement of breeding birds and the abandonment of active nests. Measures such as conducting pre-construction surveys and monitoring for breeding birds would reduce impacts to nesting birds. Impacts to animal species would be addressed by conducting species-focused surveys and biological monitoring during construction. Implementation of a Habitat Restoration/Compensation Plan also would help mitigate impacts. The Devers to Beaumont Substation alignment would follow the existing Devers to Valley alignment. In the analysis of the Devers to Valley alignment in the DPV2 EIR/EIS, all impacts to biological resources were less than significant or less than significant with mitigation.

Beaumont Substation. This grassland site is on gently rolling topography approximately 1 mile north of the Potrero ACEC, an area managed for multiple species, including a large population of Stephens' kangaroo rat. To the extent they have not been disturbed or destroyed by agricultural practices or invasive plants, the biological resources of the site may be similar to those found in the northern portion of the Potrero ACEC. Impacts would be mitigated by the same measures applicable to the transmission route between Devers and Beaumont Substations, as noted above.

Beaumont to El Casco Substation. Twenty-one sensitive wildlife species (including MSHCP Covered Species) were observed in the area during surveys conducted in 2005–2007 (CPUC, 2008). 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. Portions of San Timoteo Creek likely support common species including California tree frogs and western toad. Among the special-status species observed within riparian habitats in the project area were least Bell's

vireo, western yellow-billed cuckoo, yellow warbler, yellow-breasted chat, and southwestern willow fly-catcher. Raptors are plentiful in the region, and suitable nesting and foraging habitat for raptor species occurs throughout the area.

Impacts to wildlife in this segment of the No Action Alternative would be similar to those occurring in the 500 kV segment. As with those impacts, mitigation measures would include requiring focused surveys for species known or likely to be in the area, biological monitoring during construction, and implementation of a Habitat Restoration/Compensation Plan.

D.5.5.2 No Action Alternative Option 2

No Action Alternative Option 2 would require the construction of over 40 miles of new 500 kV transmission line, following the existing Valley-Serrano 500 kV line. The alternative is described in Section C.6.3.2, and illustrated on Figure C-6b. The eastern portion of the corridor is located within the Western Riverside County MSHCP. The western portion of the route is located in the Central/Coastal Orange County and Orange County Transportation Authority Natural Community Conservation Planning (NCCP)/Habitat Conservation Plan (HCP) areas.

Based on a search of the California Natural Diversity Database (CNDDDB), 18 special-status wildlife species have been documented to occur in or near the project area. Examples of these species are least Bell’s vireo (*Vireo bellii pusillus*; federally listed endangered, state-listed endangered), Stephens’ kangaroo rat (*Dipodomys stephensi*; federally listed endangered, state-listed threatened), arroyo toad (*Anaxyrus californicus*; federally listed endangered, California Species of Special Concern (SSC)), coastal California gnatcatcher (*Polioptila californica californica*; federally listed threatened, SSC), burrowing owl (*Athene cunicularia*; SSC), coast horned lizard (*Phrynosoma blainvillii*; SSC), orangethroated whiptail (*Aspidoscelis hyperythra*; SSC), and western spadefoot toad (*Spea hammondi*; SSC).

The direct loss of small mammals, reptiles, and other less mobile species could occur in the undeveloped areas along the alignment. The loss of vegetation would also result in the temporary loss of breeding and foraging habitat for wildlife. The removal of habitat during the bird breeding season would likely result in the displacement of breeding birds and the abandonment of active nests. Measures such as conducting pre-construction surveys and monitoring for breeding birds would reduce impacts to nesting birds. Impacts to animal species would be addressed by conducting species-focused surveys and biological monitoring during construction. Implementation of a Habitat Restoration/Compensation Plan also would help mitigate impacts.

D.5.6 Mitigation Monitoring, Compliance, and Reporting

Table D.5-6 presents the mitigation monitoring program for wildlife. Due to the length of the mitigation measure text, **the full text for each measure is not presented in this table, but is provided in Section D.5.3.3 above.**

MITIGATION MEASURE	WIL-1a: Conduct pre-construction biological resources surveys (full text in Section D.5.3.3)
Location	Construction activity in all segments.
Monitoring / Reporting Action	SCE submits field biologists’ resumes and pre-construction survey results; CPUC/BLM monitor approves report format and contents and verifies biologists’ qualifications and field survey results.

Table D.5-6. Mitigation Monitoring Program – Biological Resources, Wildlife

Effectiveness Criteria	Biologists' qualifications to include relevant field experience for resources of concern; pre-construction reports to include appropriate field methods and accurate results of each survey
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Prior to construction and during construction. Ten days prior to project activities at any given work site; nest surveys no more than four days prior to beginning work.
MITIGATION MEASURE	WIL-1b: Ensure wildlife impact avoidance and minimization (full text in Section D.5.3.3)
Location	San Bernardino County; WR-MSHCP; CV-MSHCP; BLM land; and Reservation Land (recommended)
Monitoring / Reporting Action	SCE submits required plans and guidelines for implementing identified measures to reduce impacts for review and approval by the CPUC and BLM in consultation with CDFW and USFWS. SCE monitors compliance; conducts daily inspections of bird deterrent netting (if installed) and weekly inspections of exclusion fences (if installed); conducts daily inspections of excavations; reports dead animals of non-special-status species to local animal control agency; reports dead animals of special-status species to CDFW; reports entrapped or injured special-status wildlife to CDFW or USFWS. SCE reports relocations of special-status rattlesnakes to CPUC, BLM, and CDFW.
Effectiveness Criteria	Avoidance and minimization of impacts to wildlife
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS
Timing	Prior to construction and during construction
MITIGATION MEASURE	WIL-1c: Prepare and implement a Nesting Bird Management Plan (full text in Section D.5.3.3)
Location	All segments.
Monitoring / Reporting Action	SCE submits a Nesting Bird Management Plan to include pre-construction surveys, daily sweeps of construction sites, and nest monitoring; CPUC/BLM approves plan format and contents in consultation with CDFW and USFWS. SCE submits prompt email notification of buffer reduction notifications and nest-related non-compliances to CPUC/BLM monitor. SCE notifies CPUC, BLM, CDFW, and USFWS prior to implementing buffer reductions. SCE provides daily updates to CPUC/BLM monitor on nest locations, project activities in the vicinity of nests (including helicopter traces), and adjustments to buffer areas. SCE submits annual report to CPUC, BLM, CDFW, and USFWS.
Effectiveness Criteria	Avoid or minimize impacts to nesting birds.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Throughout nesting seasons during construction phase.
MITIGATION MEASURE	WIL-2a: Conduct desert tortoise surveys, monitoring, and avoidance (full text in Section D.5.3.3)
Location	All areas with suitable habitat.
Monitoring / Reporting Action	SCE submits results of pre-construction surveys; CPUC/BLM monitor approves report format and contents in consultation with CDFW and USFWS. SCE monitors construction activities in all suitable habitat. SCE documents any instances where a tortoise was handled in daily monitoring reports and provides a summary to CPUC/BLM in annual environmental compliance reports.
Effectiveness Criteria	Avoid take of desert tortoise.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Within 14 days prior to construction, and during construction.
MITIGATION MEASURE	WIL-2b: Prepare and implement Raven Monitoring, Management, and Control Plan (full text in Section D.5.3.3)
Location	All areas with suitable desert tortoise habitat.

Table D.5-6. Mitigation Monitoring Program – Biological Resources, Wildlife

Monitoring / Reporting Action	SCE submits a Raven Monitoring, Management, and Control Plan; CPUC/BLM monitor approves report format and contents in consultation with CDFW and USFWS.
Effectiveness Criteria	Minimize project-related predator subsidies and prevent increases in raven numbers or activity within desert tortoise habitat.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Prior to the start of construction, and during construction, restoration, and O&M phases.
MITIGATION MEASURE	WIL-2c: Conduct surveys and avoidance for threatened or endangered riparian birds (full text in Section D.5.3.3)
Location	All areas with suitable habitat.
Monitoring / Reporting Action	SCE submits results of pre-construction protocol nesting-season surveys; CPUC/BLM monitor approves report format and contents in consultation with CDFW and USFWS and verifies field survey results. SCE provides immediate notification of discovery of an active breeding territory or nest to CPUC, BLM, CDFW, and USFWS and documents in daily monitoring report. SCE monitors active nests on a weekly basis and provides weekly monitoring reports to CPUC/BLM for review in consultation with CDFW and USFWS. SCE prepares a Wildlife Noise Monitoring Plan if an active breeding territory or nest is confirmed within 500 feet of any project activity site.
Effectiveness Criteria	Avoid take of threatened or endangered riparian birds; avoid or minimize take of suitable habitat.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Within one year prior to the start of construction and annually during nesting season throughout construction and restoration phases.
MITIGATION MEASURE	WIL-2d: Conduct surveys and avoidance for Stephens’ kangaroo rat (full text in Section D.5.3.3)
Location	All areas with suitable habitat.
Monitoring / Reporting Action	SCE submits results of pre-construction focused surveys; CPUC/BLM monitor approves report format and contents in consultation with CDFW and USFWS.
Effectiveness Criteria	Avoid or minimize take of Stephens’ kangaroo rat and its habitat.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Prior to the start of construction activities and during construction.
MITIGATION MEASURE	WIL-2e: Conduct surveys and avoidance for coastal California gnatcatcher (full text in Section D.5.3.3)
Location	All areas with suitable habitat.
Monitoring / Reporting Action	SCE submits results of pre-construction protocol level surveys in suitable habitat and additional focused nest/territory surveys in occupied habitat; CPUC/BLM monitor approves report format and contents in consultation with CDFW and USFWS. SCE provides immediate notification of discovery of an active breeding territory or nest to CPUC, BLM, CDFW, and USFWS and documents in daily monitoring report. SCE monitors active nests on a weekly basis and provides weekly monitoring reports to CPUC/BLM for review in consultation with CDFW and USFWS. SCE prepares a Wildlife Noise Monitoring Plan if an active breeding territory or nest is confirmed within 500 feet of any project activity site.
Effectiveness Criteria	Avoid take of coastal California gnatcatcher; avoid or minimize take of suitable habitat.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Within one year prior to the start of construction activities and during construction and restoration phases.
MITIGATION MEASURE	WIL-2f: Conduct surveys and avoidance for golden eagle (full text in Section D.5.3.3)
Location	All areas with suitable habitat within 10 miles of the project area.

Table D.5-6. Mitigation Monitoring Program – Biological Resources, Wildlife

Monitoring / Reporting Action	SCE submits results of winter and nesting season surveys conducted prior to and during construction to CPUC, BLM, CDFW, and USFWS. SCE submits Golden Eagle Monitoring and Management Plan (if needed); CPUC/BLM monitor approves plan format and contents in consultation with CDFW and USFWS. SCE submits nest activity monitoring results and adaptive management actions, if applicable, to CPUC, BLM, CDFW, and USFWS in monthly monitoring reports, with a summary in annual monitoring reports.
Effectiveness Criteria	Avoid injury or disturbance to golden eagles.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	At least one year prior to the start of construction activities and during construction.
MITIGATION MEASURE	WIL-2g: Conduct surveys and avoidance for burrowing owl (full text in Section D.5.3.3)
Location	All areas with suitable habitat.
Monitoring / Reporting Action	SCE submits pre-construction survey results; CPUC/BLM monitor verifies field survey results. SCE submits Burrowing Owl Passive Relocation Plan (if needed); CPUC/BLM monitor approves plan format and contents in consultation with CDFW and USFWS. SCE monitors replacement burrows (if installed) and submits weekly monitoring reports to CPUC and BLM.
Effectiveness Criteria	Avoid impacts to burrowing owls and occupied burrows; passive relocation of non-nesting burrowing owls.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Prior to the start of ground-disturbing activities and during construction.
MITIGATION MEASURE	WIL-2h: Conduct surveys and avoidance for special-status terrestrial herpetofauna (full text in Section D.5.3.3)
Location	All areas with suitable habitat.
Monitoring / Reporting Action	SCE conducts daily pre-construction sweeps, monitors construction for compliance, and submits weekly monitoring reports to CPUC and BLM.
Effectiveness Criteria	Avoid take of special-status terrestrial herpetofauna.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	During construction.
MITIGATION MEASURE	WIL-2i: Conduct surveys and avoidance for bats (full text in Section D.5.3.3)
Location	All areas where rocky outcrops will be graded or structures or trees will be removed.
Monitoring / Reporting Action	SCE submits pre-construction survey results; CPUC/BLM monitor approves report format and contents in consultation with CDFW and USFWS and verifies field survey results. SCE submits field biologists' resumes; CPUC/BLM monitor verifies biologists' qualifications.
Effectiveness Criteria	Avoidance or passive relocation of active bat roosts.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Within 14 days prior to grading of rocky outcrops or removal of structures or trees; during construction.
MITIGATION MEASURE	WIL-2j: Conduct surveys and avoidance for special-status small mammals (full text in Section D.5.3.3)
Location	All areas with suitable habitat.
Monitoring / Reporting Action	SCE submits construction impact minimization measures and habitat conservation measures and pre-construction survey results; CPUC/BLM monitor approves report format and contents in consultation with CDFW and USFWS and verifies field survey results. SCE submits field biologists' resumes; CPUC/BLM monitor verifies biologists' qualifications. SCE documents woodrat nest relocations in weekly monitoring reports, with a summary in annual monitoring reports, and submits to CDFW, BLM, and CPUC.
Effectiveness Criteria	Avoid take of special-status small mammals and minimize habitat impacts.

Table D.5-6. Mitigation Monitoring Program – Biological Resources, Wildlife

Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Prior to initiation of construction activities and during construction.
MITIGATION MEASURE	WIL-2k: Conduct surveys and avoidance for American badger, ringtail, and desert kit fox (full text in Section D.5.3.3)
Location	All areas with suitable habitat.
Monitoring / Reporting Action	SCE submits pre-construction survey results; CPUC/BLM monitor approves report format and contents and verifies field survey results. SCE documents den monitoring, excavations, and passive relocations in weekly monitoring reports, with a summary in annual monitoring reports, and submits to CDFW, BLM, and CPUC.
Effectiveness Criteria	Avoidance of active natal dens; avoidance or passive relocation of active non-natal dens.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	No more than 30 days prior to initiation of construction activities; during construction.
MITIGATION MEASURE	WIL-3a: Evaluate bird collision risk and implement APLIC design guidelines (full text in Section D.5.3.3)
Location	All segments.
Monitoring / Reporting Action	SCE shall provide an evaluation of risk for all Proposed Project facilities to CPUC and BLM for review and approval, in consultation with CDFW and USFWS.
Effectiveness Criteria	Conformance with APLIC design guidelines.
Responsible Agency	CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.
Timing	Prior to initiating tower construction or conductor replacement.

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