

C.3 Biological Resources

This section describes the existing conditions and potential impacts related to Biological Resources in the proposed Project area. Section C.3.1 provides a description of the affected environment. Applicable rules and regulations are introduced in Section C.3.2. Significance criteria used to evaluate potential impacts of the proposed Project and alternatives are discussed in Section C.3.3 Applicant-Proposed Measures (APMs), which are stipulations incorporated into the description of the proposed Project and/or alternatives, are presented in Section C.3.4. Analysis of potential impacts and mitigation measures for the proposed Project is located in Section C.3.5, while analyses of potential impacts and mitigation measures for alternatives to the proposed Project are located in Sections C.3.6 through C.3.11. A summary table of all impacts and mitigation measures related to Biological resources for the proposed Project and alternatives is in Section C.3.13. A discussion of potential cumulative effects of the proposed Project and alternatives is located in Section C.3.14.

A biological resources assessment, consisting of a literature review, database search, and reconnaissance survey, was conducted for the Antelope-Pardee 500-kV Transmission Project. The purpose of the assessment was to determine existing biological resources (with special emphasis on sensitive plant species, sensitive wildlife species, wildlife corridors, and sensitive habitats) that occur within the vicinity of the proposed Project and to analyze the affects of the proposed Project on biological resources.

C.3.1 Affected Environment

C.3.1.1 Literature Review

A literature search was performed prior to conducting the field portion of the assessment. The proposed Project route spans portions of the U.S. Geological Survey's (USGS) Del Sur, Sleepy Valley, Green Valley, Mint Canyon, and Newhall California 7.5' topographic quadrangles. A search of the California Department of Fish and Game California Natural Diversity Data Base (CNDDDB) was conducted for these five quadrangles to determine special-status plants, wildlife, and vegetation communities that have been documented within the vicinity of the proposed Project. Three adjacent quadrangles, Warm Springs Mountain, Lake Hughes, and Lancaster West were also included in the database search, due to their proximity to the Project. Additional data regarding the potential occurrence of special-status species and policies regarding these sensitive natural resources were gathered from the following sources:

- State and federally listed endangered and threatened animals of California (CDFG 2005a),
- Special animals list (CDFG 2005b),
- Inventory of rare and endangered vascular plants of California (CNPS 2005),
- Antelope Valley Areawide General Plan (County of Los Angeles, 1986),
- Angeles National Forest Land Management Plan (USDA Forest Service, [20054987](#)),
- Assessment of Avian Mortality from Collisions and Electrocutions (CEC 2005),
- General Plan Policy Document (City of Lancaster 1994),
- City of Santa Clarita General Plan (City of Santa Clarita 1991),
- County of Los Angeles General Plan (County of Los Angeles 1980),
- Phase I Report for San Francisquito Canyon Significant Ecological Area No. 19 (MBA 1991),
- Proponent's Environmental Assessment, Antelope Transmission Project, Segment 1 (Mackness 2004),
- Roadmap for PIER Research on Biological Issues of Siting and Managing Transmission Line ROW (CEC 2004),

- Pacific Southwest Region Regional Forester's Sensitive Species List (USDA Forest Service 2004⁴).

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

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

C.3.1.2 Survey Methodology

The field survey area included all proposed access roads, laydown areas, substation expansion and modification areas, and a 180-foot buffer area on either side of the transmission line alignment in non-forest system lands and a 160-foot buffer on either side of the transmission line alignment within the Angeles National Forest (ANF). Field survey activities included documenting plant and animal species observed or detected within the survey area and immediately adjacent areas, characterizing and mapping plant communities within the survey area, and photo-documenting existing biological conditions. Field surveys were conducted between sunrise and 4:00 p.m. on May 11, 12, July 5, 6, and 7, 2005. Weather conditions during the survey consisted of clear skies, temperatures between 68 degrees Fahrenheit (°F) and 98 °F, and winds of 0-2 miles per hour (mph) with periodic gusts of up to 15 mph.

C.3.1.3 Existing Conditions

The proposed Project ROW consists primarily of open space, most of which supports an existing transmission line and associated access roads. The proposed Project ROW segment extending from the Antelope Substation to about Mile 2.5 is characterized as high desert with relatively flat topography. Beginning at approximately Mile 2.5, the ROW traverses private agricultural and pasture lands on gently rolling foothills. In this section the topography becomes relatively steep as the ROW enters the ANF. Fuel breaks, fire access roads, Bouquet Canyon Reservoir, and an active rock quarry occur within the ANF either in or adjacent to the proposed Project ROW. Continuing west after leaving ANF land, the proposed Project traverses open space, residential neighborhoods, and commercial and light industrial land uses through the City of Santa Clarita and unincorporated areas of Los Angeles County until it reaches the existing Pardee Substation in Santa Clarita.

C.3.1.3.1 Vegetation Communities and Wildlife

Plant communities were characterized by utilizing series descriptions from "Plant Communities of California" (Sawyer and Keeler-Wolf 1995). The proposed Project ROW includes six plant communities including California Annual Grassland, Chaparral, Riparian Scrub, Willow Riparian Woodland, Oak Riparian Woodland, and Coastal Sage Scrub. Developed and landscaped areas occur in urbanized reaches of the western portion of the proposed alignment. The proposed Project area also includes agricultural and pastureland plant communities as well as exotic and invasive plant communities. The vegetation communities identified in the project area are shown on Figures C.3-1A, C.3-1B, and C.3-1C and are discussed in greater detail below.

California Annual Grassland Series. Non-native grassland communities consist of predominantly low-growing herbaceous and invasive vegetation that forms either a continuous ground cover on open hillsides and terraces or understory patches below emergent shrubs and woodlands. Many native flowering annual herb and perennial bulb species (wildflowers), as well as naturalized annual forbs and invasive exotics, are important components of grassland communities. This series occurs in the lowlands at the northern end of the alignment beginning at the Antelope Substation and continuing southwest until the foothills (approximately Mile 2.5). Dominant plant species within the California Annual Grassland Series included chess (*Bromus* sp.), wild oat grass (*Avena* sp.), filaree (*Erodium cicutarium*), doveweed (*Eremocarpus setigerus*), vinegar weed (*Trichostema lanceolatum*), California poppy (*Eschscholzia californica*), goldfields (*Lasthenia* sp.), mustards (*Brassica* sp.), and star-thistles (*Centaurea* sp.). This vegetation community occurs in the lowlands at the northern end of the alignment beginning at the Antelope Substation and continuing southwest until the foothills (approximately Mile 2.5). A photo of this community is included as Figure C.3-2 (photo A).

Several wildlife species are associated with the grassland habitat or were observed utilizing the grasslands for foraging. Small burrows that may be utilized by small mammals, amphibians, and reptiles occur throughout this community. Side-blotched lizards (*Uta stansburiana*) are a common Southern California lizard species, and several were observed along the existing access roads and disturbed areas near the Antelope Substation. Two Mojave green rattlesnakes (*Crotalus scutulatus*) and one red coachwhip (*Masticophis flagellum piceus*) were observed in the grassland habitat. Birds were the most common species identified in this habitat type and included European starling (*Sturnus vulgaris*), house finch (*Carpodacus mexicanus*), western meadowlark (*Sturnella neglecta*), horned lark (*Eremophila alpestris*), and loggerhead shrike (*Lanius ludovicianus*). Several bird species were observed foraging over the grasslands including American kestrel (*Falco sparverius*), common raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicensis*), and northern harrier (*Circus cyaneus*). Mammals observed in this plant community between Mileposts 0.0 and 2.5 include California ground squirrel (*Spermophilus beecheyi*) and desert cottontail (*Sylvilagus audubonii*). Numerous insect (ants, crickets, grasshoppers, beetles) and arachnid species (spiders, ticks) were detected in the grassland habitat. These invertebrates serve as prey for a variety of vertebrate species that are expected to occur in this area including western whiptail lizards (*Aspidoscelis tigris*), gopher snakes (*Pituophis melanoleucus*), western rattlesnakes (*Crotalus viridis helleri*), kangaroo rats (*Dipodomys* sp.), pocket mice (Family Heteromyidae), savannah sparrows (*Passerculus sandwichensis*), grasshopper sparrows (*Ammodramus savannarum*), and Say's phoebe (*Sayornis saya*).

Chaparral (Chamise Series). Chaparral communities are dominated by evergreen shrubs with small, thick, leathery, dark green, sclerophyllous leaves. The shrubs are typically tall and dense and are adapted to periodic wildfires by stump sprouting or by germination from a dormant seed bank. Chamise communities typically range from 3 to 6 feet in height but may reach up to 10 feet in height (Mayer 1988). These evergreen shrubs are also adapted to drought by deep extensive root systems, while their small thick leaf structure prevents permanent damage from moisture loss (Zedler et al., 1997). Chaparral typically occurs on moderate to steep south facing slopes with dry, rocky, shallow soils and becomes more abundant at higher elevations (up to 4000 ft) where temperatures are lower and moisture supplies are more ample. Chamise chaparral occurs in the lower foothills at the east end of the proposed Project route alignment and continues southwest of National Forest System (NFS) lands where it becomes intermittently mixed with coastal sage scrub habitat. Dominant plant species within this vegetation series included chamise (*Adenostoma fasciculatum*), California buckwheat (*Eriogonum fasciculatum*), manzanita (*Arctostaphylos* sp.), Our Lord's candle (*Yucca whipplei*), scrub oak (*Quercus berberidifolia*), wedgeleaf ceanothus (*Ceanothus cuneatus*), black sage (*Salvia mellifera*), California sagebrush (*Artemisia californica*), and toyon (*Heteromeles arbutifolia*). This plant community occupies the

largest percentage of the proposed Project area and occurs throughout the ANF. As the proposed Project ROW continues southwest of NFS lands, the chaparral intergrades with coastal sage scrub habitat. Chaparral within the ANF is dense, occurring on all aspects of the steep slopes that occur throughout the ROW. Monotypic stands of manzanita and chamise are characteristic of portions of the chaparral within the ANF. Other areas of chaparral are dominated by scrub oak (*Quercus berberidifolia*). Chaparral in the southern and western portions of the ROW within the ANF, and west of the ANF in Haskell Canyon, are recovering from a recent burn (within the last three to five years). A photo of this community is included as Figure C.3-2 (photo B).

Sulfur (Family Pieridae) and skipper (Family Hesperidae) butterflies were observed utilizing the hilltops within the chaparral habitat. Hilltopping is a common behavior for the territorial males of several butterfly species in search of mates. Other butterfly species expected to occur within this habitat and the ANF include western tiger swallowtail (*Papilio rutulus*), anise swallowtail (*P. zelicaon*), painted lady (*Vanessa cardui*), and perplexing hairstreak (*Callophrys dumetorum* var. *perplexa*). Side-blotched lizards and western whiptail lizards were common along the sides of the existing access roads and were observed basking on rocks in several locations within the chaparral habitat. One coast horned lizard (*Phrynosoma coronatum*) was observed in the middle of Del Sur Ridge road (6N18) along the Del Sur Ridge. Common ravens and red-tailed hawks were observed foraging over the chaparral habitat and perching in large trees and on the existing 66-kV transmission line towers. Stick nests were observed in a few of the transmission line towers and are likely utilized by these two species during the breeding season. Smaller bird species that take refuge in the understory of the chaparral habitat and that were observed during the surveys included California quail (*Callipepla californica*), wrenit (*Chamaea fasciata*), bushtit (*Psaltriparus minimus*), California towhee (*P. crissalis*), phainopepla (*Phainopepla nitens*), and mourning dove (*Zenaida macroura*). Larger wildlife species are also expected to occur within this habitat community including desert and dusky-footed woodrat (*Neotoma lepida* and *N. macrotis*, respectively), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), bobcat (*Felis rufus*), and mule deer (*Odocoileus hemionus*).

Riparian Communities. Numerous small drainages and creeks occur in the vicinity of the proposed Project ROW, several of which intersect the proposed ROW, including Bouquet Creek, Haskell Creek, and San Francisquito Creek. Riparian habitat is associated with many of these drainages. The riparian habitats include riparian scrub, willow riparian, oak riparian, and cottonwood-willow riparian woodland (Figures C.3-3 and C.3-4, photo A). Riparian scrub habitat was identified in lower Haskell Canyon as it parallels the ROW. The dominant plant species within riparian scrub consisted of mule fat (*Baccharis salicifolia*) with lesser amounts of willow (*Salix* sp.). Willow riparian habitat was identified along the margins of Bouquet Canyon Reservoir and its tributaries as well as along Bouquet Creek as it intersects the quarry haul road (6N19) that may be utilized as a secondary access road for the proposed Project (Figure C.3-3, photo A). Black willow (*S. gooddingi*), red willow (*S. laevigata*), and mule fat dominated this habitat. Cottonwood-willow riparian occurred in San Francisquito Creek and along a small section of Haskell Creek. These areas are dominated by sycamores and willows with sparse amounts of cottonwoods (Figure C.3-3, photo B). Oak riparian was identified at the bottoms of steep canyons within the ANF and within Haskell Canyon and its tributaries (Figure C.3-4, photo A). Oak riparian areas consisted of coast live oaks (*Q. agrifolia*) forming the largest percentage of the canopy with some interspersed cottonwoods (*Populus* sp.) and sycamores (*Platanus racemosa*).

Riparian areas are critical to many species of wildlife. The structure of the vegetation communities associated with riparian habitats provides cover and nesting habitat for songbirds and smaller birds of prey. These areas are critical for wildlife migration and dispersal. The linear configuration of riparian areas creates corridors for local animal movement where wildlife can travel to and from different habitat types and/or different areas. Butterfly species observed within the riparian habitats included alfalfa butterfly (*Colias eurytheme*), buckeye

(*Junonia coenia*), and western tiger swallowtail. Bird species that were observed within the riparian habitat communities during the survey included black-headed grosbeak (*Pheucticus melanocephalus*), Bewick's wren (*Thryomanes bewickii*), lazuli bunting (*Passerina amoena*), and western scrub jay (*Aphelocoma californica*). Several bird species associated with riparian communities would be expected to utilize similar habitats within the proposed Project ROW, including Wilson's warbler (*Wilsonia pusilla*), yellow warbler (*Dendroica petechia*), Nuttall's woodpecker (*Picoides nuttallii*), Pacific-slope flycatcher (*Empidonax difficilis*), blue-gray gnatcatcher (*Polioptila caerulea*), ruby-crowned kinglet (*Regulus calendula*), and white-tailed kite (*Elanus leucurus*). Song sparrow (*Melospiza melodia*), a forest management indicator species is also expected to forage in wetland and riparian habitat associated with the proposed Project area. Riparian vegetation occurs at these locations due to the presence of surface water. Therefore, common amphibian species that rely on water for breeding habitat, such as California treefrog (*Pseudacris cadaverina*), Pacific treefrog (*Hyla regilla*), and western toad (*Bufo boreas*), are expected to occur in these habitats. California treefrog and western toad tadpoles were observed in Haskell Creek during a site visit on July 16, 2005. Mammal species expected to occur in riparian habitat communities include Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), and raccoon (*Procyon lotor*).

Coastal Sage Scrub. Coastal Sage Scrub communities are characterized by low-growing, drought-tolerant shrub species. This community typically consists of an over story of shrubs less than six feet in height and a low herbaceous layer less than three feet tall (Mayer 1988). Dominant species within this community include California sagebrush, California buckwheat, black sage, white sage (*S. apiana*), and brittlebush (*Encelia farinosa*). Other components include laurel sumac (*Malosma laurina*), deerweed (*Lotus scoparius*), and sugarbush (*Rhus ovata*). This vegetation community occurs in the foothills at the southwestern end of the alignment in the Santa Clarita vicinity, but has been highly fragmented by urban development. In areas with steeper topography, coastal sage scrub generally occurs on south- and west-facing slopes with deeper soils, while chaparral generally occurs on the steeper, rockier north- and east-facing slopes. Sage scrub and chaparral communities form a mosaic pattern of distribution in these areas based on topography and hillside aspect. Some of the sage scrub appears to have been planted as part of slope stabilization or restoration projects by adjacent developments. Coastal sage scrub also occurs in smaller patches at the base of slopes within the ANF, but these patches were not large enough to differentiate from chaparral communities in the vegetation map. A photo of this community is included as Figure C.3-4, photo B.

One butterfly species, the common checkered white butterfly (*Pontia protodice*), was observed within this community during the field surveys. Several insects (butterflies, ants, grasshoppers, crickets) are also expected to occur. Numerous small bird species were detected within coastal sage scrub habitats along the Proposed Project ROW, including sage sparrow (*Amphispiza belli*), Bewick's wren, California towhee, California quail, ash-throated flycatcher (*Myiarchus cinerascens*), wren, and western kingbird (*Tyrannus verticalis*). Other bird species expected to occur include spotted towhee, black phoebe (*Sayornis nigricans*), mourning dove, greater roadrunner (*Geococcyx californianus*), and Cassin's kingbird (*Tyrannus vociferans*). Mammal species expected to occur within coastal sage scrub communities include pocket mice, kangaroo rats, desert cottontails, black-tailed jackrabbits (*Lepus californicus*), coyotes, gray foxes, and bobcats.

Agriculture and Pasture Lands. This type of land use is prevalent along the ROW in the Antelope Valley, between Johnson Road and Lake Elizabeth Road, and in the Leona Valley, between Lake Elizabeth Road and the ANF boundary. Cereal crops, such as barley (*Hordeum vulgare*), wheat (*Tritium aestivum*), and meadow timothy (*Phleum pretense*) have replaced native vegetation in these areas. Grazing has replaced the native vegetation with invasive, non-native plant species in the pasture areas. Where grazing has reduced native plant cover, there is generally a corresponding reduction in habitat value for many wildlife species. However, other

animals, such as raptors and burrowing owls, may seek these areas because the altered conditions have improved their foraging opportunities.

Agricultural use of the land also has a direct effect upon which wildlife species are likely to use an area. Croplands are generally found on fertile soils on flat or nearly flat topography that historically supported prime habitat for native species. Although agricultural fields can provide a year-round source of food for many wildlife species, some agricultural practices such as harvest practices, fencing, trapping, and applying pesticides can reduce the value of these lands to wildlife. However, these areas may provide foraging habitat for migrating waterfowl and resident birds associated with Elizabeth Lake. Deer and other wildlife also likely forage in agricultural fields located adjacent to the ANF. Suitable habitat for denning and nesting occurs along the weedy edges of fields and irrigation canals as well as in fallow agricultural fields.

Animals observed within the pasture and agricultural areas include domestic cattle (*Bos taurus*), llamas (*Lama glama*), and domestic horse (*Equus caballus*). Mixed flocks of blackbirds that included red-winged blackbirds (*Agelaius phoeniceus*), brown-headed cowbirds (*Molothrus ater*), and Brewer's blackbird (*Euphagus cyanocephalus*) were observed foraging in the pasture land alongside the cattle. Great egrets (*Ardea alba*) and snowy egrets (*Egretta thula*) were observed foraging in the pasture and agricultural lands. Other species expected to occur in these areas include California treefrog, Pacific treefrog, pocket mice, Botta's pocket gopher (*Thomomys bottae*), coyote, gray fox, and mule deer.

Noxious and Exotic Weeds. The 2005 Angeles National Forest Land Management Plan (Forest Plan) currently indicates that noxious and invasive plant species pose a threat to native plant and animal species in the ANF. Noxious weeds identified in the Final Environmental Impact Statement Angeles National Forest Land and Resources Management Plan includes yellow star thistle (*C. solstitialis*) and distaff thistle (*Carthamus lanatus*). The USDA Forest Service maintains a list of over 100 plant species that are considered invasive. Some of these invasive plant species that are known to occur in the region include yellow star thistle, spotted knapweed (*C. maculosa*) (on the Los Padres), white sweet clover (*Melilotus alba*), Russian thistle (*Salsola tragus*), and brome grasses such as soft chess (*B. hordeaceas*), cheat grass (*B. tectorum*), and red brome. These species can effectively displace native species and modify the ecology of the forest. Of particular concern is Dalmatian toadflax (*Linaria genistifolia ssp. dalmatica*). It is rated as a moderate invader on the Cal-Ipc (California Invasive Plant Council) list. Within the past year it has been found in Hungry Valley OHV (off-highway vehicle) area. It is approximately 5 air miles from the project. This is the only known location of Dalmatian toadflax found in Los Angeles County. In addition, Geraldton carnation weed (*Euphorbia terracina*) has been rapidly spreading in the Santa Monica Mountains. While it is 25 air miles from the project site, if introduced it has the potential to aggressively spread throughout the Sierra Pelona range. Invasive species identified in the project area include brome grasses, Russian thistle, and white sweet clover. Other non-native species that occur along the proposed Project ROW include tocalote (*C. melitensis*), tree tobacco (*Nicotiana glauca*), Spanish broom (*Spartium junceum*), and field mustard (*Brassica rapa*).

Noxious and invasive plants readily colonize open disturbed soils, and therefore thrive in areas affected by human activities like grading and brush clearance. These areas are typically dominated by herbaceous, introduced, pioneering plant species such as non-native grasses, mustards, and Russian thistle. While these areas may provide a certain degree of erosion control for recently disturbed or graded areas, they also pose a threat to the natural biodiversity of an area.

Populations of noxious or invasive weeds were observed along road shoulders of paved and dirt access roads, in disturbed areas around the footings of existing transmission line towers, in recently burned areas and along firebreaks, and near residences and developed areas. Small mammals such as Botta’s pocket gophers and California ground squirrels that benefit from disturbed areas, and seed-eating bird species such as lesser goldfinches (*Carduelis psaltria*), American goldfinches (*C. tristis*), European starlings, and house finches, are expected to utilize these areas.

C.3.1.3.2 Sensitive Vegetation Communities

The literature review determined that 12 sensitive vegetation communities or habitats are known to occur within the vicinity of the proposed Project. The field survey determined that five of these sensitive vegetation communities (Riversidean Alluvial Fan Sage Scrub, Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian, Southern Riparian Scrub, and Southern Riparian Scrub) and one sensitive habitat (Southern California Threespine Stickleback Stream) occur within the proposed Project area. All five of these sensitive vegetation communities/habitats that were identified in the proposed Project area are associated with drainages. The vegetation communities/habitats are listed in Table C.3-1.

Table C.3-1. Sensitive Vegetation Community Occurrence within Proposed Alignment		
Sensitive Vegetation Community/Habitats	Occurs in Survey Area	Location Description and Approximate MP (if found in survey area)
California Walnut Woodland	No	NA
Mainland Cherry Forest	No	NA
Riversidean Alluvial Fan Sage Scrub	Yes	San Francisquito Creek, upstream of ROW
Southern California Threespine Stickleback Stream	Yes	San Francisquito Creek, Mile 24.1
Southern Coast Live Oak Riparian Forest	Yes	Various Drainages within ANF at Miles 6.2, 7.6, and 8.7 Haskell Canyon at Miles 17.8, 18.4, and 19.5
Southern Cottonwood Willow Riparian	Yes	Haskell Canyon Miles 19.6-20.6 San Francisquito Creek Mile 24.1
Southern Riparian Scrub	Yes	Haskell Canyon, downstream of ROW
Southern Sycamore Alder Riparian Woodland	No	NA
Southern Willow Scrub	Yes	Bouquet Canyon Road intersection with Spunky Canyon Road (south of Mile 8.6) Bouquet Canyon Road intersection with quarry haul road (south of Mile 12.0).
Valley Needlegrass Grassland	No	NA
Valley Oak Woodland	No	NA
Wildflower Field	No	NA

Source: CNDDDB and CNPS database search of Lake Hughes, Del Sur, Warm Springs Mountain, Green Valley, Sleepy Valley, Newhall, and Mint Canyon 7.5 minute quads, 2005.
NA = Not Applicable

C.3.1.3.3 Sensitive Plant Species

Table C.3-2 lists federal and State listed species, Forest Service “Sensitive Plant” species, and plants identified as Sensitive List 1B by the California Native Plant Society (CNPS) that may occur in or near the proposed Project area. A record search using the California Natural Diversity Database (CNDDDB) was conducted for special status plant species, and vegetation community surveys were conducted along the proposed Project ROW.

The CNDDDB and CNPS literature search identified thirteen plant species that are known to occur within the vicinity of the proposed Project and that have potential to occur within the survey area. Review of the USDA Forest Service list of sensitive plants for the Angeles National Forest identified 47 additional plant species. Each

of these species was assessed for its potential to occur within the proposed Project area based on the following criteria:

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

Twenty-nine of the sensitive plant species were determined to have little or no potential to occur on site due to lack of suitable environmental conditions. Table C.3-2 summarizes the sensitive plant species known to occur within the Project vicinity and their potential for occurrence within the proposed alignment. A detailed account of the species with a low, moderate, or high potential to occur is included in the subsequent paragraphs.

Scientific Name	Common Name	Status	Potential for Occurrence	Blooming Period	Known and Potential Occurrence and Elevational Limits
<i>Arctostaphylos gabrielensis</i>	San Gabriel Manzanita	1B, FSS R-E-D: 3-2-3	Low	Mar	chaparral; 1500 m (4920 ft)
<i>Arenaria macradenia</i> var. <i>kuschei</i>	Kusche's sandwort	1B, FSS R-E-D: 3-3-3	Moderate	Jun-Jul	Granitic openings in chaparral; 1220-1695 m (4000-5560 ft)
<i>Astragalus bicristatus</i>	crested milk-vetch	4, FSS R-E-D: 1-1-3	Not Likely to Occur	May-Aug	Lower and upper montane coniferous forest; 1700-2745 m (5576-9000 ft)
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	FE, 1B R-E-D: 3-3-3	Moderate	Feb-Jul	closed-cone coniferous forests, chaparral, coastal scrub, recent burned or disturbed areas (usually carbonate) in valley and foothill grasslands; 0-640 m (0-2100 ft)
<i>Astragalus lentiginosus</i> var. <i>antoniuss</i>	San Antonio milk-vetch	1B, FSS R-E-D: 3-1-3	Not Likely to Occur	Apr-Jul	Lower and upper montane coniferous forest; 1500-2600 m (4920-8528 ft)
<i>Astragalus lentiginosus</i> var. <i>sierrae</i>	Big Bear Valley milk-vetch	1B, FSS R-E-D: 2-2-3	Not Likely to Occur	Apr-Aug	Mojave desert scrub, meadows and seeps, pinyon and juniper woodland, upper montane coniferous forest (gravelly or rocky); 1800 - 2600 m (5900-8525 ft)
<i>Berberis nevini</i>	Nevin's barberry	FE, SE, 1B FSS R-E-D: 3-3-3	High Moderate	Mar-Apr	chaparral, cismontane woodland, coastal scrub, alluvial scrub (sandy or gravelly); 295-895 m (970-2940 ft)
<i>Botrychium crenulatum</i>	scalloped moonwort	2, FSS R-E-D: 2-2-1	Not Likely to Occur	Jun-Sep	bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps; 1500-3280 m (4920-10750 ft)
<i>Botrychium minganense</i>	Mingan moonwort	1, FSS R-E-D: 3-2-1	Not Likely to Occur	Jul-Sep	lower and upper montane coniferous forest; 1500-2055 m (4920-6740 ft)

Table C.3-2. Known and Potential Occurrence of Special-Status Plant Species Within and Adjacent to the Proposed Alignment

Scientific Name	Common Name	Status	Potential for Occurrence	Blooming Period	Known and Potential Occurrence and Elevational Limits
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	4 R-E-D: 3-3-3	Moderate	Jun	chaparral, cismontane woodland, coastal scrub, valley and foothill grasslands, and vernal pools; 0 – 860 m (0 – 2,820 ft)
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily	1B, FSS R-E-D: 3-2-3	High	Mar-Jun	chaparral, coastal scrub; 360-1000m (1180-3280 ft)
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Palmer's mariposa lily	1B, FSS R-E-D: 2-2-3	Moderate	May-Jul	chaparral, lower montane coniferous forest, mesic meadows and seeps 1000-2390 m (3280-7840 ft)
<i>Calochortus plummerae</i>	Plummer's mariposa lily	1B, FSS R-E-D: 2-2-3	High	May-Jul	chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grasslands (granitic, rocky); 90-1610 m (300-5280 ft)
<i>Calochortus striatus</i>	alkali mariposa lily	1B, FSS R-E-D: 2-2-2	Moderate	Apr-Jun	chaparral, chenopod scrub, Mojavean desert scrub, alkaline and mesic meadows and seeps; 70-1595 m (230-5230 ft)
<i>Calochortus weedii</i> var. <i>vestus</i>	late-flowered mariposa lily	1B, FSS R-E-D: 2-2-3	Moderate	Jun-Aug	chaparral, cismontane woodland, riparian woodland (often serpentinite); 275 - 900 m (900-2960 ft)
<i>Canbya candida</i>	pygmy poppy	4, FSS R-E-D: 1-2-3	Not Likely to Occur	Mar-Jun	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland; 600-1200 m (1970-3936 ft)
<i>Castilleja gleasoni</i>	Mt. Gleason Indian paintbrush	CR, 1B, FSS R-E-D: 3-2-3	Not Likely to Occur	May-Jun	lower montane coniferous forest, pinyon and juniper woodland; 1160-2170 m (3800-7115 ft)
<i>Castilleja plagiotoma</i>	Mojave Indian paintbrush	4, FSS R-E-D: 1-1-3	Not Likely to Occur	Apr-Jun	Great Basin scrub (alluvial), Joshua tree woodland, lower montane coniferous forest, pinyon and juniper woodland; 300 - 2500 m (980-8200 ft)
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	San Fernando Valley spineflower	FC, SE, 1B, FSS R-E-D: 3-3-3	High	Apr-Jul	coastal scrub (sandy); 150-1220 m (490-4000 ft)
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	3, FSS R-E-D: ?-2-3	Moderate	Apr-Jun	chaparral, coastal scrub (sandy or rocky openings); 40 - 1705 m (130-5590 ft)
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	white-bracted spineflower	1B R-E-D: 2-2-3	Moderate	Apr-Jun	Mojavean desert scrub, pinyon and juniper woodland; 300-1200 m (980-3940 ft)
<i>Claytonia lanceolata</i> var. <i>peirsonii</i>	Peirson's spring beauty	1B, FSS R-E-D: 3-3-3	Not Likely to Occur	May-Jun	subalpine coniferous forest, upper montane coniferous forest; 2135-2745 m (7000-9000 ft)
<i>Deinandra mohavensis</i>	Mojave tarplant	SE, 1B, FSS R-E-D: 2-1-3	Moderate	Jul-Oct	chaparral, coastal scrub, riparian scrub (mesic); 640 - 1600 m (1115-5250 ft)
<i>Dodecahema leptoceras</i>	slender-horned spineflower	FE, SE, 1B, FSS R-E-D: 3-3-3	Low	Apr-Jun	mature alluvial scrub; 200-700 m (660-2300 ft)
<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>	San Gabriel River dudleya	1B, FSS R-E-D: 3-2-3	Moderate	Apr-Jul	chaparral (granitic); 275 - 425 m (900-1390 ft)
<i>Dudleya densiflora</i>	San Gabriel Mountains dudleya	1B, FSS R-E-D: 3-3-3	Moderate	Mar-Jul	chaparral, coastal scrub, granitic cliffs and canyon walls in lower montane coniferous forests; 300-520 m (980-1710 ft)
<i>Dudleya multicaulis</i>	many-stemmed dudleya	1B, FSS R-E-D: 3-3-3	Moderate	Mar-Jul	chaparral, coastal scrub, valley and foothill grasslands; 0-790 m (0-2590 ft)
<i>Eriogonum kennedyi</i> var. <i>alpigenum</i>	southern alpine buckwheat	1B, FSS R-E-D: 2-1-3	Not Likely to Occur	Jul-Sep	alpine boulder and rock fields, subalpine coniferous forest; 2600-3500 m (8520-11500 ft)

Table C.3-2. Known and Potential Occurrence of Special-Status Plant Species Within and Adjacent to the Proposed Alignment

Scientific Name	Common Name	Status	Potential for Occurrence	Blooming Period	Known and Potential Occurrence and Elevational Limits
<i>Eriogonum microthecum</i> var. <i>johnstonii</i>	Johnston's buckwheat	1B, FSS R-E-D: 3-1-3	Not Likely to Occur	Jul-Sep	subalpine coniferous forest, upper montane coniferous forest; 2225-2900 m (7300-9510 ft)
<i>Erodium macrophyllum</i>	round-leaved filaree	2 R-E-D: 2-3-1	High	Mar-May	cismontane woodland, valley and foothill grassland (clay); 15-1200 m (50-3940 ft)
<i>Galium grande</i>	San Gabriel bedstraw	1B, FSS R-E-D: 3-1-3	Moderate	Jan-Jul	broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest; 425-1500 m (1390-4920 ft)
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	1A	Moderate	Aug-Oct	marshes and swamps (coastal salt and freshwater); 10-1675 m (30-5500 ft)
<i>Heuchera abramsii</i>	Abrams's alumroot	4, FSS R-E-D: 1-1-3	Not Likely to Occur	Jul-Aug	upper montane coniferous forest (rocky); 2800 - 3500 m (9180-11500 ft)
<i>Heuchera elegans</i>	urn-flowered alumroot	4, FSS R-E-D: 1-1-3	Not Likely to Occur	May-Aug	cismontane woodland, lower montane coniferous forest, upper montane coniferous forest (rocky); 1155 - 2650 m (3790-8690 ft)
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	mesa horkelia	1B, FSS R-E-D: 2-3-3	Moderate	Feb-Jul	cismontane woodland, coastal scrub (sandy or gravelly); 70 - 810 m (230-2660 ft)
<i>Hulsea vestita</i> ssp. <i>gabrielensis</i>	San Gabriel Mountains sunflower	4, FSS R-E-D: 1-1-3	Not Likely to Occur	May-Jul	lower montane coniferous forest, upper montane coniferous forest (rocky); 1500 - 2500 m (4920-8200 ft)
<i>Hulsea vestita</i> ssp. <i>pygmaea</i>	pygmy hulsea	1B, FSS R-E-D: 2-1-3	Not Likely to Occur	Jun-Oct	alpine boulder and rock field, subalpine coniferous forest (granitic, gravelly); 2835 - 3900 m (9300-12790 ft)
<i>Lepechinia fragrans</i>	fragrant pitcher sage	4, FSS R-E-D: 1-2-3	Moderate	Mar-Oct	chaparral; 20 - 1310 m (65-4300 ft)
<i>Lilium parryi</i>	lemon lily	1B, FSS R-E-D: 2-2-2	Not Likely to Occur	Jul-Aug	lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest; 1220-2745 m (4000-9000 ft)
<i>Linanthus concinnus</i>	San Gabriel linanthus	1B, FSS R-E-D: 3-2-3	Not Likely to Occur	Apr-Jul	chaparral, lower montane coniferous forest, upper montane coniferous forest; 1520-2800 m (4985-9184 ft)
<i>Lupinus peirsonii</i>	Peirson's lupine	1B, FSS R-E-D: 2-1-3	Not Likely to Occur	Apr-Jun	Joshua tree woodland, lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest (gravelly or rocky); 1000 - 2500 m (3280-8200 ft)
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	1B, FSS R-E-D: 2-1-3	Moderate	Jun-Aug	broadleaved upland forests, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grasslands; 730-2195 m (2395-7200 ft)
<i>Monardella viridis</i> ssp. <i>saxicola</i>	rock monardella	4, FSS R-E-D: 1-2-3	Moderate	Jun-Sep	chaparral and rocky sites in lower montane coniferous forest; 500-1800 m (1640-5900 ft)
<i>Navarretia fossalis</i>	spreading navarretia	FT, 1B, FSS R-E-D: 2-3-2	Not Likely to Occur	Apr-Jun	chenopod scrub, marshes and swamps (assorted shallow freshwater), vernal pools, playas; 30-1300 m (100-4265 ft)
<i>Navarretia peninsularis</i>	Baja navarretia	1B, FSS R-E-D: 2-2-2	Not Likely to Occur	Jun-Aug	chaparral, lower montane coniferous forest; 1500-2300 m (4920-7545 ft)
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	short-joint beavertail	1B, FSS R-E-D: 3-2-3	High	Apr-Jun	chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland; 425-1800 m (1394-5900 ft)

Table C.3-2. Known and Potential Occurrence of Special-Status Plant Species Within and Adjacent to the Proposed Alignment

Scientific Name	Common Name	Status	Potential for Occurrence	Blooming Period	Known and Potential Occurrence and Elevational Limits
<i>Orcuttia californica</i>	California orcutt grass	FE, SE, 1B	Moderate	Apr-Aug	vernal pools; 15-660 m (50-2164 ft)
<i>Oreonana vestita</i>	woolly mountain-parsley	1B, FSS R-E-D: 2-1-3	Not Likely to Occur	May-Sep	lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest (gravel or talus); 1615 - 3500 m (5300-11480 ft)
<i>Orobanche valida</i> <i>ssp. valida</i>	Rock Creek broomrape	1B, FSS R-E-D: 3-2-3	Low	May-Jul	chaparral and granitic sites in pinyon and juniper woodland; 1250-2000 m (4100-6560 ft)
<i>Parnassia cirrata</i> <i>cirrata</i>	fringed grass-of-parnassus	1B, FSS R-E-D: 2-1-3	Not Likely to Occur	Aug-Sep	lower montane coniferous forest, meadows and seeps, upper montane coniferous forest (mesic, streamsides); 2135 - 3000 m (7000-9840 ft)
<i>Phacelia exilis</i>	Transverse Range phacelia	4, FSS R-E-D: 1-1-3	Not Likely to Occur	May-Aug	lower montane coniferous forest, meadows and seeps, upper montane coniferous forest (sandy or gravelly); 1100 - 2700 m (3610-2700 ft)
<i>Potentilla glandulosa</i> <i>ssp ewanii</i>	Ewan's cinquefoil	1B, FSS R-E-D: 3-1-3	Not Likely to Occur	Jun-Jul	lower montane coniferous forest (near seeps and springs); 1900 - 2400 m (6230-7870 ft)
<i>Scutellaria bolanderi</i> <i>ssp. austromontana</i>	southern skullcap	1B, FSS R-E-D: 2-2-3	Not Likely to Occur	Jun-Aug	Chaparral, cismontane woodland, lower montane coniferous forest (mesic); 600 - 2000 m (1970-6560 ft)
<i>Senecio aphanactis</i>	rayless ragwort	2 R-E-D: 3-2-1	Moderate	Jan-Apr	chaparral, cismontane woodland, coastal scrub (alkaline); 15-800 m (50-2620 ft)
<i>Streptanthus bernardinus</i>	Laguna Mountains jewel-flower	4, FSS R-E-D: 1-1-3	Moderate	Jun-Jul	chaparral, lower montane coniferous forest; 670 - 2500 m (2200-8200 ft)
<i>Streptanthus campestris</i>	southern jewel-flower	1B, FSS R-E-D: 2-1-2	Moderate	May-Jul	chaparral, lower montane coniferous forest, pinyon and juniper woodland (rocky); 900 - 2300 m (2950-7540 ft)
<i>Swertia neglecta</i>	pine green-gentian	4, FSS R-E-D: 1-1-3	Not Likely to Occur	May-Jul	lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest; 1400-2500 m (4590-8200 ft)
<i>Symphyotrichum defoliatum</i>	San Bernardino aster	1B, FSS R-E-D: 2-2-3	Moderate	Jul-Nov	cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic); 2-2040 m (7-6690 ft)
<i>Thelypteris puberula</i>	Sonoran maiden fern	2, FSS R-E-D: 2-2-1	Not Likely to Occur	Jan-Sep	meadows and seeps (seeps and streams); 50 - 610 m (160-2000 ft)

Species in bold may be present on National Forest Lands

FE – Federally-listed Endangered
FT – Federally-listed Threatened
FC – Federal Candidate for Listing
CR – California Rare
CNPS R-E-D Code
SE – State (CA)-listed Endangered
ST – State (CA)-listed Threatened

Rarity:

- 1: Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
- 2: Occurrence confined to several populations or one extended population.
- 3: Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported

Endangerment:

- 1: Not endangered.
- 2: Endangered in a portion of its range.
- 3: Endangered throughout its range.

FSS – USDA Forest Service Sensitive
CNPS 1A – Presumed extinct in California
CNPS 1B – Rare or Endangered in California and elsewhere
CNPS 2 - Rare or Endangered in California, more common
CNPS 3 – More information needed (Review List)
CNPS 4 – Limited Distribution (Watch List)

Distribution:

- 1: More or less widespread outside California.
- 2: Rare outside California.
- 3: Endemic to California (i.e., does not occur outside California).

Species Accounts

Kusche's sandwort (*Arenaria macradenia* var. *kuschei*). Kusche's sandwort is a CNPS List 1B, Forest Service Sensitive (FSS) perennial herb occurring in granitic openings in chaparral at elevations ranging from 1,220 – 1,695 meters (4,000 – 5,560 feet) above mean sea level (amsl). Chaparral vegetation occurs along much of the ROW; therefore, there is a moderate potential for the occurrence of this species.

San Gabriel Manzanita (*Arctostaphylos gabrielensis*). San Gabriel manzanita is a CNPS List 1B, FSS perennial evergreen shrub occurring in chaparral (rocky) at elevations approximately 1,500 meters (4,920 feet) amsl. Although suitable chaparral occurs along the ROW, the only known occurrences of this species is from the Mill Creek Summit divide located in the San Gabriel Mountains; therefore, there is a low potential for this species to occur.

Braunton's milk-vetch (*Astragalus brauntonii*). Braunton's milk-vetch is a federal-listed endangered, CNPS List 1B perennial herb occurring in closed-cone coniferous forests, chaparral, coastal scrub, and in recent burned or disturbed areas (usually carbonate) in valley and foothill grasslands at elevations ranging from 0 – 640 meters (0 – 2,100 feet) amsl. Chaparral, coastal scrub, and recently burned grassland occur along the ROW; therefore, there is a moderate potential for this species to occur.

Nevin's barberry (*Berberis nevinii*). Nevin's barberry is listed as federal and state endangered, CNPS List 1B, and FSS perennial evergreen shrub occurring in coarse soils and rocky slopes in chaparral, cismontane woodland, coastal scrub, and gravelly wash margins in alluvial scrub at elevations ranging from 295 – 895 meters (970 – 2,940 feet) amsl. The Project survey area contains areas with conditions conducive to the occurrence of Nevin's barberry and this species has been documented as occurring within 2 miles of the ROW; therefore, there is a high potential for the occurrence of this species along the ROW.

Thread-leaved brodiaea (*Brodiaea filifolia*). Thread-leaved brodiaea is a federal-listed threatened, state-listed endangered, and CNPS List 1B, and FSS bulbiferous herb occurring in openings in chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grasslands, and vernal pools (often clay) at elevations ranging from 0 – 860 meters (0 – 2,820 feet) amsl. Chaparral, coastal scrub, and grassland communities occur along the ROW; therefore, there is a moderate potential for the occurrence of this species. The site does not fall within proposed critical habitat for thread-leaved brodiaea (USFWS 2004).

Slender mariposa lily (*Calochortus clavatus* var. *gracilis*). Slender mariposa lily is a CNPS List 1B bulbiferous herb occurring in chaparral and coastal scrub at elevations ranging from 360 – 1,000 meters (1,180 – 3,280 feet) amsl. Both chaparral and coastal scrub vegetation communities occur within the survey area and the species has been recorded within 1 mile of the ROW; therefore, there is a high potential for occurrence of this species.

Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*). Palmer's mariposa lily is a CNPS List 1B, FSS bulbiferous herb occurring in chaparral, lower montane coniferous forest, and mesic meadows and seeps at elevations ranging from 1,000 – 2,390 meters (3,280 – 7,840 feet) amsl. Chaparral habitat occurs along the majority of the ROW; therefore, there is a moderate potential for the occurrence of this species.

Plummer's mariposa lily (*Calochortus plummerae*). Plummer's mariposa lily is a CNPS List 1B species bulbiferous herb occurring in rocky and sandy sites, typically of alluvial or granitic material, in coastal scrub, chaparral, cismontane woodland, lower montane coniferous forest and valley and foothill grasslands at elevations ranging from 90 – 1,610 meters (300 – 5,280 feet) amsl. Both chaparral and coastal scrub vegetation

communities occur within the survey area and there are records of occurrence of this species within 5 miles of the ROW (near Valencia); therefore, there is a high probability of occurrence of this species.

Late-flowered mariposa lily (*Calochortus weedii* var. *vestus*). Late-flowered mariposa lily is a CNPS List 1B, FSS bulbiferous herb occurring in chaparral, cismontane woodland, riparian woodland (often serpentinite) at elevations ranging from 275 - 900 meters (900-2,960 feet) amsl. Suitable chaparral and riparian woodland habitat occurs along the ROW; therefore, there is a potential for the occurrence of this species in the project area.

Alkali mariposa lily (*Calochortus striatus*). Alkali mariposa lily is a CNPS List 1B, FSS bulbiferous herb occurring in chaparral, chenopod scrub, Mojavean desert scrub, and alkaline or mesic meadows and seeps at elevations ranging from 70 - 1,595 meters (230 - 5,230 feet) amsl. Chaparral vegetation occurs along the majority of the ROW; therefore, there is a moderate potential for the occurrence of this species.

San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*). The San Fernando Valley spineflower is a candidate for federal listing, a state-listed endangered, FSS, and a CNPS List 1B annual herb occurring in coastal scrub at elevations ranging from 150 - 1,220 meters (490 - 4,000 feet) amsl. Coastal scrub vegetation communities occur between Miles 20.7 and 25.6, and the species has been recorded within 3 miles of the ROW (near Castaic Junction). Therefore, this species has a high potential for occurrence along the western portions of the ROW.

Parry's spineflower (*Chorizanthe parryi* var. *parryi*). Parry's spineflower is a CNPS List 3, FSS annual herb occurring in chaparral and coastal scrub (sandy or rocky openings) at elevations ranging from 40 - 1,705 meters (130-5,590 feet) amsl. Chaparral occurs along most of the ROW and coastal scrub vegetation communities occur between Miles 20.7 and 25.6 therefore; this species has a moderate potential for occurrence along the western portions of the ROW.

White-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*). White-bracted spineflower is a CNPS List 1B annual herb occurring in Mojavean desert scrub and pinyon and juniper woodland at elevations ranging from 300 - 1,200 meters (980 - 3,940 feet) amsl. These vegetation communities do not occur within the survey area, however, this species has been recorded as occurring within 5 miles of the ROW (in Leona Valley); therefore, there is a moderate potential for occurrence of this species.

Mojave tarplant (*Deinandra mohavensis*). Mojave tarplant is a state-listed endangered and CNPS List 1B and FSS annual herb occurring in chaparral, coastal scrub, and mesic riparian scrub at elevations ranging from 640 - 1,600 meters (1,115-5,250 feet) amsl. Chaparral, coastal scrub, and riparian scrub habitat occurs along the ROW; therefore, there is a moderate potential for the occurrence of this species.

Slender-horned spineflower (*Dodecahema leptoceras*). Slender-horned spineflower is a federal-listed and state-listed endangered species and CNPS List 1B, and FSS annual herb found in sandy soil in association with mature alluvial scrub at elevations ranging from 200 - 700 meters (660 - 2,300 feet) amsl. Prigge, et al, (1993) found that the ideal habitat appears to be a terrace or bench that receives overbank deposits every 50 to 100 years. While only marginally suitable environmental conditions associated with this species' presence are found along portions of San Francisquito and Haskell Canyon, it has been recorded approximately 6 miles from the ROW (near Forest Park); therefore, there is a low potential for occurrence.

San Gabriel River dudleya (*Dudleya cymosa* ssp. *Crebrifolia*). San Gabriel River dudleya is a CNPS List 1B, FSS-perennial herb occurring in granitic chaparral at elevations ranging from 275 - 425 meters (900-1,390

feet) amsl. This species occurs on granitic chaparral slopes which are found along the proposed Project ROW; therefore, this species has a moderate potential to occur.

San Gabriel Mountains dudleya (*Dudleya densiflora*). San Gabriel Mountains dudleya is a CNPS List 1B, FSS perennial herb occurring in chaparral, coastal scrub, and valley and foothill grasslands at elevations ranging from 0 - 790 meters (0 - 2,590 feet) amsl. All three of these communities occur along the ROW; therefore, there is a moderate potential for the occurrence of this species.

Many-stemmed dudleya (*Dudleya multicaulis*). Many-stemmed dudleya is a CNPS List 1B, FSS perennial herb occurring in chaparral, coastal scrub, and valley and foothill grasslands at elevations ranging from 0 - 790 meters (0 - 2,590 feet) amsl. All three of these communities occur along the ROW; therefore, there is a moderate potential for the occurrence of this species.

Round-leaved filaree (*Erodium macrophyllum*). Round-leaved filaree is a CNPS List 2 annual herb occurring in cismontane woodland and valley and foothill grasslands at elevations ranging from 15 - 1,200 meters (50 - 3,940 feet) amsl. Grasslands occur within the survey area between Miles 0.0 and 3.3, and this species has been recorded as occurring within 5 miles of the ROW (near Munz Canyon); therefore, this species has a high potential for occurrence.

San Gabriel bedstraw (*Galium grande*). San Gabriel bedstraw is a CNPS List 1B and FSS deciduous shrub occurring in broadleaved upland forests, chaparral, cismontane woodland, and lower montane coniferous forests at elevations ranging from 425 - 1,500 meters (1,390 - 4,920 feet) amsl. Chaparral occurs throughout the majority of the Proposed Project ROW; therefore, this species has a moderate potential to occur.

Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*). Los Angeles sunflower is a CNPS List 1A rhizomatous herb occurring in coastal and freshwater marshes and swamps at elevations ranging from 10 - 1,675 meters (30 - 5,500 feet) amsl. This species was last seen in 1937 and was considered extinct until 2002 when it was located on Newhall Ranch. Although suitable habitat for this species was not detected within the survey area, this species has a moderate potential to occur due to its known occurrence within 5 miles of the Pardee Substation.

Mesa horkelia (*Horkelia cuneata* ssp. *puberula*). Mesa horkelia is a CNPS List 1B, FSS perennial herb occurring in cismontane woodland and coastal scrub (sandy or gravelly) vegetation communities at elevations ranging from 70 - 810 meters (230-2,660 feet) amsl. Coastal scrub occurs along the ROW; therefore, there is a moderate potential for this species to occur.

Fragrant pitcher (*Lepechinia fragrans*). Fragrant pitcher is a CNPS List 4, FSS perennial shrub occurring in chaparral at elevations ranging from 20 - 1,310 meters (65-4,300 feet) amsl. Suitable chaparral habitat occurs along the ROW; therefore, there is a moderate potential for this species to occur.

Hall's monardella (*Monardella macrantha* ssp. *hallii*). Hall's monardella is a CNPS List 1B, FSS rhizomatous herb occurring in broadleaved upland forests, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland at elevations ranging from 730 - 2,195 meters (2,400 - 7,200 feet) amsl. Both chaparral and grasslands occur within the ROW; therefore, there is a moderate potential for the occurrence of this species.

Rock monardella (*Monardella viridis* ssp. *saxicola*). Rock monardella is a CNPS List 4, FSS rhizomatous herb occurring in chaparral and rocky sites in lower montane coniferous forest at elevations ranging from 500 -

1,800 meters (1,640 – 5,910 feet) amsl. Chaparral habitat occurs along the majority of the ROW; therefore, there is a moderate potential for the occurrence of this species.

Short-joint beavertail (*Opuntia basilaris* var. *brachyclada*). Short-joint beavertail is a CNPS 1B and FSS succulent occurring in chaparral, Joshua tree “woodland”, Mojavean desert scrub, and pinyon and juniper woodland at elevations ranging from 425 – 1,800 meters (1,390 – 5,910 feet) amsl. This species has been recorded as occurring within 5 miles of the ROW (near Forest Park) and a previous survey of the proposed ROW reported this plant occurring within one-quarter mile of the current proposed ROW, along the Del Sur Ridge Road (Taylor 2002). Suitable chaparral habitat occurs throughout the majority of the proposed alignment; therefore there is a high potential for occurrence of this species.

California orcutt grass (*Orcuttia californica*). California Orcutt grass is a federal- and state-listed endangered, CNPS List 1B annual herb occurring in vernal pools at elevations ranging from 15 – 660 meters (50 – 2,170 feet) amsl. These conditions do not occur along the ROW, however, California orcutt grass has been documented as occurring within 5 miles of the ROW and; therefore, there is a moderate potential for this species to occur within the survey area.

Rock Creek broomrape (*Orobanche valida* ssp. *valida*). Rock Creek broomrape is a CNPS List 1B, FSS perennial parasitic herb occurring in chaparral and granitic sites in pinyon and juniper woodland at elevations ranging from 1,250 – 2,000 meters (4,100 – 6,560 feet) amsl. Chaparral occurs within the ROW, but the highest elevation of the ROW is slightly below the lowest recorded elevation for this species; therefore, there is a low potential for the occurrence of this species.

Southern skullcap (*Scutellaria bolanderi* ssp. *austromontana*). Southern skullcap is a CNPS List 1B, ~~FSS~~ perennial rhizomatous herb occurring chaparral, cismontane woodland, mesic lower montane coniferous forest at elevations ranging from 600 – 2,000 meters (1,970-6,560 feet) amsl. Chaparral vegetation communities occur within the project area; therefore, there is a low ~~moderate~~ probability of occurrence of this species in that area.

Rayless ragwort (*Senecio aphanactis*). Rayless ragwort is a CNPS List 2 annual herb occurring in chaparral, cismontane woodland, and coastal scrub at elevations ranging from 15 – 800 meters (50 – 2,620 feet) amsl. Both chaparral and coastal scrub vegetation communities occur within the survey area; therefore, there is a moderate probability of occurrence of this species in that area.

Laguna Mountains jewel-flower (*Streptanthus bernardinus*). Laguna Mountains jewel-flower is a CNPS List 4, ~~FSS~~-perennial herb occurring in chaparral and lower montane coniferous forest at elevations ranging from 670 – 2,500 meters (2,200-8,200 feet) amsl. Chaparral habitat occurs within the project area; therefore, there is a moderate probability of occurrence of this species in that area.

Southern jewel-flower (*Streptanthus campestris*). Southern jewel-flower is a CNPS List 1B, ~~FSS~~ perennial herb occurring in chaparral, lower montane coniferous forest, pinyon and juniper woodland (rocky) at elevations ranging from 900 – 2,300 meters (2,950-7,540 feet) amsl. Chaparral occurs along the ROW; therefore, there is a moderate probability of occurrence of this species in that area.

San Bernardino aster (*Symphyotrichum defoliatum*). San Bernardino aster is a CNPS List 1B, ~~FSS~~-perennial rhizomatous herb occurring in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and vernal mesic valley and foothill grasslands at elevations ranging from 2-2,040 meters (7-6,690 feet) amsl. Coastal scrub, marsh and grassland communities occur within the project area; therefore, there is a moderate probability of occurrence of this species in that area.

C.3.1.3.4 Sensitive Wildlife Species

Table C.3-3 contains a list of the special-status species listed as threatened or endangered under the federal or California Endangered Species Acts, species proposed for listing, species of special concern, and other species which have been identified by the USFWS, Forest Service, or CDFG as unique or rare and which have the potential to occur within the proposed Project area. The CNDDDB literature search identified sixteen wildlife species that are known to occur within the proposed Project region and that have the potential to occur within the proposed Project area. Review of the USDA Forest Service list of sensitive wildlife for the Angeles National Forest identified sixteen additional wildlife species. A review of biological documents, personal communications with USFWS and ANF personnel, and the identification of suitable habitat during the field surveys resulted in nineteen additional wildlife species that could potentially occur within the proposed Project area. Each of these species was assessed for its potential to occur based on the following criteria:

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

Four sensitive wildlife species were observed in the Proposed Project area during the reconnaissance surveys conducted in 2005/ 2006 these included loggerhead shrike, northern harrier, California horned lark, golden eagle (*Aquila chrysaetos*), and coast horned lizard. Five species were determined to have little or no potential to occur on site due to lack of suitable environmental conditions.

Table C.3-3. Known and Potential Occurrence of Special-Status Wildlife Species Within and Adjacent to Proposed Alignment				
Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
INVERTEBRATES				
<i>Helminthoglypta vasquezi</i>	Vasquez shoulderband snail	Endemic	High	Coastal sage scrub/chaparral in vicinity of Vasquez Rocks (Mint Canyon watershed) and Aqua Dulce Canyon, Los Angeles County; probably occurs throughout scrub habitats in mountains west to Tejon Pass (Roth, B. and F.G. Hochberg. 1992. Two new species of <i>Helminthoglypta</i> (Gastropoda: Pulmonata) from southern California, with comments on the subgenus <i>Charodotes</i> Pilsbry. The Veliger 35(4):338-346.]
<i>Streptocephalus wootoni</i>	Riverside fairy shrimp	FE	Moderate	Known from Cruzan Mesa, S of Vasquez Road in Los Angeles County (northernmost record for species); potential elsewhere in region in vernal pools and ephemeral man-made water sources (Eriksen, C. and D. Belk. 1999. Fairy shrimps of California’s puddles, pools, and playas. Mad River Press, Eureka, CA. 195 p.]

Table C.3-3. Known and Potential Occurrence of Special-Status Wildlife Species Within and Adjacent to Proposed Alignment

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
AMPHIBIANS				
<i>Batrachoseps gabrieli</i>	San Gabriel Mountains slender salamander	FSS	Not Likely to Occur	Occurs on talus slopes and shaded areas near mountain streams. Species known range is limited to the San Gabriel and San Bernardino Mountains.
<i>Bufo californicus</i>	arroyo toad	FE, CSC	High	Found in shallow, gravelly streams and rivers. Closest known occurrence within the Santa Clara River (CNDDDB 2005) approximately 2.6 miles downstream of the ROW crossing at San Francisquito Creek. Known from Castaic Creek and Santa Clara River between the LA County line and Hwy 5 and between Soledad Canyon and Acton (SCR Steering Committee 1996).
<i>Ensatina eschscholtzii croceater</i>	yellow-blotched salamander	CSC, FSS	Moderate	Litter and debris of oak woodland, pine dominated open woodland, and fir dominated open forest. Limited habitat occurs in the ROW.
<i>Rana aurora draytonii</i>	California red-legged frog	FT, CSC	Present	Occurs in lowlands and foothills in or near permanent water. Known to occur within upper San Francisquito Creek (USGS 2005) and in Amargosa Creek at Ritter Ranch (CNDDDB 2005). Proposed ROW crosses both watersheds. A few freshwater marshes exist adjacent to the Santa Clara River on its floodplain, in addition to the habitat present along the Santa Clara River between Soledad Canyon and Acton in Los Angeles County (south of the proposed ROW).
<i>Rana boylei</i>	foothill yellow-legged frog	CSC, FSS	Low	Small to moderate-sized streams with cobble-sized substrate in hardwood, mixed conifer, coastal scrub, mixed chaparral, and wet meadow habitats. Limited suitable habitat is present and this species has not been documented in project area.
<i>Rana mucosa</i>	mountain yellow-legged frog	FE, CSC, FSS	Low	Occurs in ponds, dams, lakes, and streams at moderate to high elevations containing sufficient supplies of water. Closest population is in San Gabriel Mountains south of Hwy 14 and one record from 1970 in Piru Creek, west of I-5 (CNDDDB 2005).
<i>Spea hammondi</i>	western spadefoot	CSC	High	Vernal pools within grasslands. Several records occur in San Francisquito Canyon and adjacent uplands in the vicinity of the ROW; also known from City of Santa Clarita, Bouquet Canyon, Sand Canyon, and Placerita Canyon watersheds (L.E. Hunt, pers. observ.).
FISH				
<i>Catostomus santaanae</i>	Santa Ana sucker	FT, CSC, FSS	Moderate	Sand, rubble, or boulder-bottomed streams. Known to occur within Santa Clara River, 12 miles downstream from the site, and Hasley Canyon, a tributary of the Santa Clara River. San Francisquito and Bouquet Canyon creeks may provide habitat.
<i>Gasterosteus aculeatus williamsoni</i>	unarmored threespine stickleback	FE, SE, FSS, FP	Present	Cool, clear southern CA streams with abundant vegetation. Known to occur within San Francisquito Creek and the Santa Clara River (CNDDDB 2005), although this species is mostly restricted to the Santa Clara River above its confluence with Piru Creek to the Los Angeles Aqueduct crossing upstream of Bouquet Canyon Road. Occurrences have also been documented at an Arizona crossing in Bouquet Creek just upstream of the Streamside Campground (Sue 2005).
<i>Gila orcutti</i>	arroyo chub	CSC, FSS	Present	Slow water sections of south coastal streams with mud or sand bottoms. Closest CNDDDB record is 1.9 miles downstream in San Francisquito Creek. This species is known to occur in San Francisquito and Bouquet Creeks (Sue 2005).
<i>Rhinichthys osculus</i> ssp.	Santa Ana speckled dace	CSC, FSS	Low	Requires cool shallow permanent flowing streams, with cobble and gravel bottom riffles. Creeks in the vicinity of the ROW do not provide perennial flow so suitable habitat is not present.

Table C.3-3. Known and Potential Occurrence of Special-Status Wildlife Species Within and Adjacent to Proposed Alignment

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
REPTILES				
<i>Anniella pulchra pulchra</i>	silvery (=California) legless lizard	CSC, FSS	High	Sandy or loose loamy soils under sparse vegetation. Known to occur west and south-southwest of Lancaster and 7.9 miles southeast of Antelope Substation in Amargosa Creek. Also known from Charlie Canyon and Castaic Creek watersheds (L.E. Hunt, pers. observ.). Suitable habitat and soil conditions are present throughout ROW alignment.
<i>Charina bottae umbratica</i>	southern rubber boa	ST, FSS	Not Likely to Occur	Occurs in conifer forests near streams and meadows. Known to occur in the Transverse Range, San Bernardino Mountains, and San Gabriel Mountains.
<i>Charina trivirgata</i>	coastal rosy boa	FSS	Moderate	Fairly dense vegetation and rocky habitat within desert and chaparral from the coast to Mojave and Colorado deserts. Suitable habitat is present in project area in mountainous regions south of the Antelope Valley.
<i>Clemmys marmorata pallida</i>	southwestern pond turtle	CSC, FSS	High	Deep pools in rivers and streams below 6000' with adequate basking sites. Reported occurrences near Lake Hughes and Elizabeth Lake at north end of alignment and near south end of alignment. Suitable habitat occurs in ponds between Miles 3.0 and 5.0, inlets to Bouquet Reservoir, and Bouquet Creek, and in Castaic Creek, Piru Creek, and Santa Clara River watersheds.
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	FSS	Moderate	Open, relatively rocky areas, often in moist areas near intermittent streams. Suitable habitat is present in the chaparral near drainages along the ROW alignment.
<i>Lampropeltis zonata parvirubra</i>	San Bernardino Mountain kingsnake	CSC, FSS	Low	Canyons with rocky outcrops or rocky talus slopes in conifer forest or chaparral habitats. No reported occurrences in project vicinity but some potential habitat is present near the ROW.
<i>Phrynosoma coronatum</i>	California horned lizard	CSC, FSS	Present	Open grassland, scrub, and chaparral with sandy substrates and ample ant prey base. Observed at Milepost 15.4. Expected to occur along much of the ROW alignment.
<i>Thamnophis hammondi</i>	two-striped garter snake	CSC, FSS	High	Permanent streams, intermittent creeks, vernal pools. Suitable habitat present in ponds and drainages in ROW.
BIRDS				
<i>Accipiter cooperii</i>	Cooper's hawk (nesting)	CSC	High	Nests in woodlands, especially riparian growths and residential areas; likely occurs in the riparian habitats in drainages throughout the ROW and in developed areas in Santa Clarita and near Pardee Substation.
<i>Accipiter gentilis</i>	northern goshawk	CSC, FSS	Low	Nests in coniferous forests and woodland edges adjacent to open foraging areas. No suitable habitat in the ROW.
<i>Accipiter striatus</i>	sharp-shinned hawk (nesting)	CSC	Moderate	Migratory species in Southern California area in winter typically associated with riparian areas. Suitable wintering habitat occurs in riparian areas along ROW.
<i>Aquila chrysaetos</i>	golden eagle (nesting and wintering)	CSC, BCC, FP	Present	Nests in cliff-walled canyons and large solitary trees in close proximity to open foraging habitat. Observed near Bouquet Canyon Road but no nests observed in the ROW.
<i>Athene cunicularia</i>	burrowing owl (burrow sites)	CSC, BCC	Moderate	Open lowlands including grasslands, desert scrub, and agricultural areas. Not observed during breeding season surveys in 2005 in grasslands along ROW, but overwinters throughout the Antelope Valley.
<i>Buteo swainsoni</i>	Swainson's hawk (nesting)	ST, FSS, BCC	Moderate	Breeds in stands with few trees in juniper-sage flats, riparian areas, and oak savannahs. Fall and winter transient to Antelope Valley. Oak trees in ANF might provide suitable habitat.
<i>Circus cyaneus</i>	Northern harrier (nesting)	CSC	Present	Marshes, wetlands, meadows, and grasslands. Limited suitable nesting habitat present in agricultural areas between Mileposts 3.0 and 5.0. One individual observed foraging near Antelope Substation.

Table C.3-3. Known and Potential Occurrence of Special-Status Wildlife Species Within and Adjacent to Proposed Alignment

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo (nesting)	FC, SE, FSS, BCC	Not Likely to Occur Low	Prefers dense riparian scrub habitat. Closest known occurrences are within riparian habitat along the Santa Clara River prior to 1980 (CNDDDB 2005). Riparian habitats along Bouquet and San Francisquito Creeks may support this species.
<i>Dendroica petechia brewsteri</i>	yellow warbler (nesting)	CSC	High	Riparian areas with willows, cottonwoods, aspens, sycamores, and alders. Suitable habitat present near Bouquet Canyon Road, Bouquet Reservoir, Haskell Canyon, and San Francisquito Canyon. Observed in 2004 in Bouquet Creek, 1.8 miles south of Mile 24.0.
<i>Elanus leucurus</i>	white-tailed kite (nesting)	FP	High	Rolling foothills and valley margins with scattered oaks, riparian, or marshes next to deciduous woodlands. Suitable nesting habitat is present in riparian drainages near the ROW.
<i>Empidonax traillii</i>	willow flycatcher (nesting)	SE, FSS	Moderate	Occurs in lowland riparian habitat. Migrants have been observed in Bouquet Canyon but this species is not known to nest in the area (Sue 2005). Riparian habitats along Bouquet and San Francisquito Creeks could support this species. One CNDDDB record from Santa Clara River in 1997.
<i>Eremophila alpestris actia</i>	California horned lark	CSC	Present	Short-grass prairie, mountain meadows, open coastal plains, fallow fields, alkali flats. Observed in grasslands near Antelope Substation.
<i>Falco columbarius</i>	merlin (wintering)	CSC	Moderate	Seacoasts, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Suitable habitat occurs throughout the project area.
<i>Falco mexicanus</i>	prairie falcon (nesting)	CSC, BCC	Moderate	Forages in open arid areas; requires cliffs for nesting. Suitable foraging habitat occurs throughout the ROW but suitable nesting habitat is not present.
<i>Falco peregrinus anatum</i>	peregrine falcon (nesting)	SE, FSS, BCC, FP	Low (Foraging only)	Requires ledges of cliffs, tall buildings, or other manmade structures near a water source for nesting. No known occurrences within immediate vicinity.
<i>Gymnogyps californianus</i>	California condor	FE, SE, FP	Low (Foraging only)	Requires vast expanses of open grasslands, savannah, and chaparral in mountain areas for foraging. Nests on clefts in rocky areas. Being reintroduced to the area from Hopper Mountain 16.5 miles west of the proposed Project. Have been sighted over the San Gabriel Mountains since release (Farris pers. comm.).
<i>Haliaeetus leucocephalus</i>	bald eagle (nesting and wintering)	FC, SE, FP	Low	Nests in large trees with open branches near lake margins, oceans, and rivers; communal winter roosts in similar locations. Suitable habitat is present around Bouquet Reservoir, although bald eagles are not known to occur in Angeles National Forest (Sue 2005).
<i>Icteria virens</i>	yellow-breasted chat (nesting)	CSC	Moderate	Dense riparian thickets of willow and other brushy tangles near watercourses. Suitable riparian habitat is present along Bouquet Creek and near Bouquet Reservoir. Marginal habitat occurs in San Francisquito and Haskell Canyons.
<i>Poliopitila californica californica</i>	coastal California gnatcatcher	FT, CSC	High	Occurs in coastal sage scrub below 3000' from Baja California to south Ventura County. Closest known occurrence is in Plum Canyon, 4 miles from the proposed Project (Farris pers. comm.). Coastal sage scrub patches between Mileposts 21.0 and 25.6 may support this species.
<i>Strix occidentalis occidentalis</i>	California spotted owl	CSC, FSS	Moderate	Occurs in mountainous coniferous forests and oak-conifer woodland. Breeding records from Liebre-Sawmill Mountain area. Suitable nesting habitat present in vicinity of Project ROW and may forage in ROW.
<i>Vireo bellii pusillus</i>	least Bell's vireo (nesting)	FE, SE, BCC	Moderate	Occurs in lowland riparian habitat. This species is not known to nest in the area (Sue 2005). Riparian habitat near Bouquet Reservoir, Bouquet Creek, Haskell Creek, and San Francisquito Creek provides suitable habitat for this species.

Table C.3-3. Known and Potential Occurrence of Special-Status Wildlife Species Within and Adjacent to Proposed Alignment

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
MAMMALS				
<i>Antrozous pallidus</i>	pallid bat	CSC, FSS	High	Deserts, grasslands, shrublands, woodlands, and forests with rocky areas for roosting. Suitable foraging habitat present along much of the ROW.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	CSC, FSS	High	Roosts in the open hanging from the ceilings or walls of caves or buildings. Suitable foraging habitat present along much of the ROW.
<i>Euderma maculatum</i>	spotted bat	CSC	High	Deserts, grasslands, mixed conifer forests; roosts in cliffs or caves. Suitable foraging habitat present along much of the ROW.
<i>Eumops perotis californicus</i>	western mastiff bat	CSC FSS	High	Known from Piru Creek watershed (L.E. Hunt, pers. observ.) and Santa Clarita/Valencia area (Constantine, D.G. 1998. Range extensions of ten species of bats in California. Bull. Southern California Acad. Sci. 97(2):49-75.); likely roosts and forages throughout much of Proposed Project ROW.
<i>Lasiurus blossevillii</i>	western red bat	FSS	Moderate	Roosts in trees from sea level up through mixed conifer forests. Suitable roosting trees are present in many areas along the ROW alignment. Although there are no records of this species occurring near the ROW.
<i>Myotis velifer</i>	cave myotis	CSC	High	Known from Antelope Valley and Santa Clara River watershed, including Santa Clarita/Valencia area (Constantine, 1998); likely roosts and forages throughout much of Proposed Project ROW.
<i>Myotis yumanensis</i>	Yuma myotis	CSC FSS	High	Widely observed throughout Transverse Range (L.E. Hunt, pers. observ.); frequently observed foraging in proximity to water (stock ponds, lakes, reservoirs, streams).
<i>Perognathus alticolus alticolus</i>	white-eared pocket mouse	CSC, FSS	Unlikely to occur in project region	The white-eared pocket mouse is known only from a series of allopatric populations in arid yellow pine communities in the vicinity of Little Bear Valley and Strawberry Peak, San Bernardino Mountains, San Bernardino County. It has not been collected since 1934 (Williams 1986).
<i>Perognathus alticolus inexpectatus</i>	Tehachapi pocket mouse	CSC, FSS	Moderate	Arid annual grassland and desert shrub communities. Known from the Tehachapi Mountains in the vicinity of Tehachapi Pass, Kern County on the northeast, to the vicinity of Mount Pinos, Ventura County on the northwest, and Elizabeth and Quail lakes, Los Angeles County on the south (Williams et al., 1993; Best, 1994). Within this area, it has been collected from mid-elevation scrub habitats associated with Peace Valley, Castac Valley, Cuddy Canyon, and the San Andreas Rift Zone (Grinnell, J. 1933. Review of the recent mammal fauna of California. Univ. Calif. Publ. Zool. 40:71-234; Brylski, P., L. Barkley, R. McKernan, S. Montgomery, R. Minnich, and M. Price. 1993. Suitable grassland habitat occurs between Mileposts 0.0 and 5.0.
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	CSC, FSS	Unlikely to occur in project area	Low elevation grasslands and coastal sage associations with soils comprised of fine sands. Apparently not found north of San Fernando Valley. Subspecies <i>P.I. longimembris</i> occurs in the Antelope Valley.
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	CSC	Moderate	Desert and scrub habitat with friable soils. Within California, the <i>ramona</i> subspecies is restricted to the coastal and desert slopes of the Transverse Ranges of central Los Angeles County (including the Newhall-Santa Clarita Valley area), southwestern San Bernardino, Orange, and western Riverside counties southward through the Peninsular Range of San Diego County, approximately to the Mexican border.
<i>Ovis Canadensis nelsoni</i>	San Gabriel Mountains Big Horn Sheep	FSS	Unlikely to occur in project region	Inhabits open, rocky, steep areas with access to water and herbaceous vegetation. Not known to occur in or adjacent to the project area. Populations currently managed in the Sheep management area of the San Ganiel Mountains.

Table C.3-3. Known and Potential Occurrence of Special-Status Wildlife Species Within and Adjacent to Proposed Alignment

Scientific Name	Common Name	Status	Potential for Occurrence	Habitat and Known Occurrences
<i>Spermophilus mohavensis</i>	Mohave ground squirrel	ST	Not Likely to Occur	Occurs in the Mojave Desert in desert scrub and Joshua tree woodlands with winterfat (<i>Krascheninnikovia lanata</i>) and spiny hopsage (<i>Grayia spinosa</i>). Closest known occurrence is in Palmdale, 12.2 miles east of the site and east of Hwy 14.
<i>Taxidea taxus</i>	American badger	CSC	Moderate	Dry scrub, forest, and herbaceous habitat. Suitable habitat is present where chaparral and scrub occurs. Formerly widespread in the Antelope Valley; likely occurs in small numbers throughout the ROW north and east of Santa Clarita.

Species in bold may be present on National Forest Lands

FE – Federally listed Endangered

SE – State (CA)-listed Endangered

FP – State (CA) Fully Protected

FT – Federally listed Threatened

ST – State (CA)-listed Threatened

FSS – Forest Service Sensitive

FPD – Federally Proposed for Delisting

CSC – CDFG Special Concern Species

BCC – USFWS Bird of Conservation Concern

Species Accounts

Amphibians

San Gabriel Mountains slender salamander (*Batrachoseps gabrieli*). The San Gabriel Mountains slender salamander is a FSS species. This species has a limited range in the San Gabriel and the western San Bernardino Mountains, typically occurring in forested talus slopes, and shaded areas near streams. They are mostly active on rainy or wet nights during moderate temperatures. During dry periods or when air temperatures drop below freezing, the slender salamander often retreats deep into talus slopes, or hides under large rocks and logs. Marginal quality habitat occurs along the intermittent drainages within the ANF. No occurrences have been reported within the proposed Project vicinity. Because the known range of this species is limited to the San Gabriel and San Bernardino Mountains, this species is unlikely to occur.

Arroyo toad (*Bufo californicus*). The arroyo toad is listed as endangered by the federal government and is a California Special Concern (CSC) species. This species is also listed as a MIS by the ANF. The proposed Project is not located within the designated critical habitat for this species (USFWS 2005b). The arroyo toad occurs in semi-arid regions including valley-foothill, desert riparian, and desert wash habitat. This species breeds in shallow, gravelly streams, and rivers with sandy banks that typically contain willows, cottonwoods, and sycamores, and it has been known to utilize upland habitat within 2000 meters (6,562 feet) of breeding habitat for foraging and wintering (USFWS 2005b).

The closest CNDDDB occurrence was recorded just east of Interstate 5 within the Santa Clara River in 1994 (CNDDDB 2005). Suitable habitat for this species is present within the ROW at San Francisquito Creek. San Francisquito Creek joins the Santa Clara River 2.1 miles downstream from the ROW, and the reported arroyo toad location is within ½-mile of this confluence. There are known locations within San Francisquito and Castaic Creek watersheds, and may occur in the Bouquet Canyon Creek watershed. Suitable habitat is also present within the ROW in Haskell Canyon; however channelization of the creek between the ROW and Bouquet Junction makes the expansion of arroyo toads from the Santa Clara River into this area very unlikely. Other areas of suitable habitat within the region include the active channels of Castaic Creek and the Santa Clara River channel from the Los Angeles County line east to I-5, and from the mouth of Soledad Canyon east to Acton where associated riparian woodlands and forest provide suitable habitat for this species (SCR Project Steering Committee 1996).

Yellow-blotched salamander (*Ensatina eschscholtzii croceater*). The yellow-blotched salamander is a CSC species and a FSS species. It occurs in the Tehachapi Mountains and Frazier Peak-Alamo Mountain portion of the San Emigdio Mountains of Kern, Los Angeles, and Ventura counties. This species occurs in oak and pine-oak woodlands and pine-fir forest with a shrub understory, where it is found among the oak tree leaf litter and woody debris. Suitable oak woodland/scrub habitats occur in the Sierra Pelona, so this species has a moderate probability of occurring in this portion of the project area.

California red-legged frog (*Rana aurora draytonii*). The California red-legged frog is listed as threatened by the federal government and is a CSC species. The proposed Project occurs just south of the LOS-1 Unit (San Francisquito Creek) and east of the VEN-3 Unit (Piru Creek) of the revised proposed critical habitat for this species (USFWS 2005). This species occurs in lowlands and foothills in or near permanent sources of deep (≥ 0.7 m), still, or slow moving waters; and often prefer dense, shrubby or emergent riparian vegetation (arroyo willow, cattails, and rushes) which cover a large portion of the water's surface. This species was recorded within upper San Francisquito Creek during focused surveys conducted by U.S. Geological Survey (USGS) in 2005 (USGS 2005, CNDDDB 2005).

Focused surveys for this species at Los Angeles County Department of Public Works' Shadow Debris Basin and Copper Hill Debris Retaining Inlet in 2004 (both of which occur within 2.5 miles of Mile Post 20.3) did not detect this species (Chambers Group 2004a). Natural drainages occur throughout the proposed alignment. These drainages are dry most of the year, but some isolated pools that may be deep enough for the survival and reproduction of California red-legged frogs may exist in the headwaters, upstream of the Project ROW. This species is also known to occur in Amargosa Creek in Ritter Ranch, which is located approximately 5 miles southeast of the proposed Project (CNDDDB 2005). Amargosa Creek flows through the eastern portion of the proposed Project area through the Leona Valley. Artificial stockponds in agricultural and grazing lands in Leona Valley and adjacent uplands between Miles 3.0 and 5.0 can also provide a permanent water source for this species. Due to the known occurrences of this highly aquatic species in upstream and downstream portions of San Francisquito and Amargosa Creeks, this species may be present in portions of these watersheds that occur within the proposed ROW. A few small freshwater marsh areas occur on the floodplain and reaches of the Santa Clara River in Soledad Canyon continuing east of Acton through Los Angeles County south of the proposed Project, which may serve as potential habitat for this species (SCR Project Steering Committee 1996). Habitat for the red-legged frog along the Santa Clara River is scarce due to a lack of vegetation necessary to shade ponds and pools in these low flow channels.

Foothill yellow-legged frog (*Rana boylei*). The foothill yellow-legged frog is a CSC and a FSS species. This species requires shallow, flowing water, and prefers small to moderate sized streams with some cobble sized substrate. Suitable habitat is limited to Bouquet Creek and lower portions of San Francisquito and Haskell Creeks. Because this species has not been documented within the project vicinity, this species has a low probability for occurrence.

Mountain yellow-legged frog (*Rana mucosa*). The mountain yellow-legged frog is listed as endangered by the federal government and is a CSC species, ~~and is a FSS species~~. The proposed Project is not located within proposed critical habitat for this species (USFWS 2005a). This species inhabits ponds, dams, lakes, and streams at moderate to high elevations. This species prefers shorelines along open streams and lakes with gently sloping banks. Suitable habitat within the ROW is marginal and is limited to Bouquet Reservoir, Bouquet Creek, and San Francisquito Creek. In southern California, this species is currently known to be isolated into three distinct populations in the San Gabriel, San Bernardino, and San Jacinto mountains. The closest occurrences are from the San Gabriel population, which is limited to the mountains south of Highway 14. One museum specimen was

collected from the Piru River north of Highway 14, but this was an isolated occurrence from 1970 and this location is separated from the proposed Project area by Interstate 5. This species is also known to occur within the Sierra Nevada in East-Central California. Because of the limited distribution of this species within Southern California, this species has a low potential for occurrence.

Western spadefoot (*Spea hammondi*). The western spadefoot is a CSC species. The western spadefoot occurs in coastal sage scrub, chaparral, and grasslands, where it may be found in sandy washes, on floodplains and in low hills. Temporary breeding pools are a crucial requirement for the spadefoot's continued occupation of an area. Several records for this species occur within San Francisquito Canyon and its adjacent upland habitat in the vicinity of the existing transmission line ROW. Potential breeding habitat occurs within Haskell Canyon, San Francisquito Canyon, grasslands and lowland hills between Miles 0.0 and 5.0, and lowland hills between Miles 21.3 and 25.2. Therefore, this species has a high potential to occur.

Fish

Santa Ana sucker (*Catostomus santaanae*). The Santa Ana sucker is listed as threatened by the federal government and is a CSC species, ~~and an FSS species. This species is also listed as a MIS by the ANF.~~ This fish species is endemic to the Los Angeles Basin. Typical habitat for this species consists of sand, rubble, or boulder-bottomed south coastal streams. The Project does not fall within critical habitat for this species (USFWS 2005b). The closest known occurrence is from 1975 within Hasley Canyon, a tributary to the Santa Clara River (CNDDDB 2005). Current (2004) records document this species within the Santa Clara River drainage between San Francisquito Canyon and Santa Paula (CNDDDB 2005), approximately 10 miles west of the River's junction with San Francisquito Creek. When water flow is readily available, suitable habitat is present within San Francisquito Creek and Bouquet Creek, both tributaries to the Santa Clara River. Therefore, this species has a moderate potential to occur within these watersheds.

Arroyo chub (*Gila orcutti*). The arroyo chub is a CSC and a FSS species. ~~This species is also listed as a MIS by the ANF.~~ This fish species occurs in Los Angeles basin south coastal streams and prefers slow-moving sections of streams with mud or sand bottoms. This species is known to occur within the Santa Clara River and the closest known record is from 1999 and is located at the McBean Parkway overcrossing, approximately 1.9 miles downstream of the ROW's intersection with San Francisquito Creek (CNDDDB 2005). This species is known to occur in San Francisquito and Bouquet Creeks (Sue 2005). When water flow is readily available, suitable habitat is present within San Francisquito Creek at the proposed ROW's crossing of the creek and Bouquet Creek at the quarry haul road crossing of the creek. Therefore, this species is assumed to be present within the proposed ROW at the crossing of San Francisquito Creek and Bouquet Creek.

Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*). The unarmored threespine stickleback is listed as endangered by the state and federal governments, ~~is a FSS and MIS species, a~~ and is a state fully protected (FP) species. San Francisquito Creek, which crosses the proposed alignment near Mile 24.0, is designated as Significant Ecological Area (SEA) No. 19 because it provides habitat for this species and San Francisquito Creek is recognized as a Southern California Threespine Stickleback Stream, a sensitive habitat community. According to the Phase I Report for San Francisquito Canyon SEA No. 19 prepared in 1991, the stickleback was limited to permanent streams and pools above Baird Canyon and below Drinkwater Reservoir and the Santa Clara River which San Francisquito Creek eventually ties into (MBA 1991). A 1998 occurrence was recorded within San Francisquito Creek, 100 meters north of San Francisquito Canyon Road, which is approximately 5.5 miles upstream of the proposed alignment crossing of the creek (CNDDDB 2005). Focused surveys in 2004 did not detect this species in San Francisquito Creek at Decoro Road (approximately 1,500 feet downstream of the proposed transmission line crossing) or lower Bouquet Canyon Creek (1.8 miles

south of Mile 24.0) (Chambers Group 2004a). When water flow is readily available, suitable habitat is present within San Francisquito Creek and Bouquet Canyon Creek, both tributaries to the Santa Clara River. There has also been a confirmed occurrence within Bouquet Canyon Creek upstream of the Arizona crossing at Streamside campground (USGS, Forest Service). Therefore, this species is assumed to be present on site within the Bouquet Creek and San Francisquito Creek watersheds.

Reptiles

Silvery legless lizard (*Anniella pulchra pulchra*). The silvery legless lizard is a CSC, and a FSS species. In California, its range extends from Contra Costa County to the Mexican border. This species requires sandy or loose loamy soils under sparse vegetation for burrowing and is strongly associated with soils that contain high moisture content. It has been found in beaches, chaparral, or pine-oak woodland habitat and sycamore, cottonwood, or oak riparian habitat that grows on stream terraces. This species is common, though discontinuously distributed in the southern Antelope Valley, Sierra Pelona, and the remainder of the project area (L.E. Hunt, pers. Observation, CNDDDB 2005). Potential habitat for this species is present in drainages that occur throughout the alignment, therefore this species has a high potential to occur.

Coastal rosy boa (*Charina trivirgata*). The coastal rosy boa is a FSS species. This species occurs in desert and chaparral habitat from the coast to the Mojave and Colorado deserts. It prefers a mixture of moderately dense, brushy vegetation and rocky cover. The closest known occurrence is within Soledad Canyon, approximately 14 miles southeast of the Project (Chambers Group 2004b). Suitable habitat is present within the chaparral habitat that occurs throughout the alignment south of the Antelope Valley, therefore this species has a moderate potential to occur.

Southwestern pond turtle (*Clemmys marmorata pallida*). The southwestern pond turtle is a CSC species and a FSS species. This species inhabits permanent or nearly permanent bodies of water and portions of streams that have deeper, slow moving water and basking sites. This species is known to occur within the vicinity of the project at Lake Hughes at the northern end of the alignment and at an undisclosed location at the southern end of the alignment, both within five miles of the site (CNDDDB, 2005). Suitable habitat is located within stockponds in agricultural and grazing lands between Miles 3.0 and 5.0, tributaries to Bouquet Reservoir, Bouquet Creek, and upstream portions of Haskell and San Francisquito Canyons. The majority of these areas occur adjacent to the project area. Therefore, potential habitat within the survey area is limited to ponds and drainages with nearly permanent water. Because suitable habitat is present and this species is known to occur in the vicinity, the potential for this species to occur is moderate.

San Bernardino ringneck snake (*Diadophis punctatus modestus*). The San Bernardino ringneck snake is a FSS species. This species occurs in open, relatively rocky areas, often in moist areas and near intermittent streams. Suitable habitat occurs in the chaparral habitat and drainages that occur throughout the alignment. No known records occur within the Project vicinity, but because suitable habitat is present, this species has a moderate potential to occur.

San Bernardino Mountain kingsnake (*Lampropeltis zonata parvirubra*). The San Bernardino Mountain kingsnake is a CSC and a FSS species. This species occurs in exposed canyons with rocky outcrops or rocky talus in close proximity to big cone spruce, canyon chaparral species, black oak, cedar, and several species of pine at higher elevations. Rocky outcrops and talus occur within the Project vicinity, but are limited within the ROW. No known records occur within the Project vicinity. This species has a low potential for occurrence.

Coast horned lizard (*Phrynosoma coronatum*). The coast horned lizard has two subspecies whose geographical ranges overlap the Project area, the San Diego subspecies (*P. coronatum* ssp. *blainvillei*) and the California coastal subspecies (*P. coronatum* ssp. *frontale*). Both subspecies are CSC and FSS species. Typically occurring in chaparral and scrub habitats with ample numbers of native ant prey, these lizards usually occupy habitats that have open basking areas and loose soils for burrowing. Suitable scrub and chaparral habitat occurs throughout the majority of the alignment. A coast horned lizard was observed on Del Sur Road at approximately Mile 15.4 during field surveys in May 2005. Since this species was observed in the survey area and both subspecies are known to occur within the ANF (Sue 2005), both subspecies are presumed to be present.

Two-striped garter snake (*Thamnophis hammondi*). The two-striped garter snake is a CSC and a FSS species. This highly aquatic species occurs within permanent waters, often along streams with rocky beds and riparian habitat. It is known to occur in coastal California from Salinas to Baja California. The closest records are within Amargosa Creek, approximately 7.5 miles east of the Project and Oak Spring Canyon, approximately 7.6 miles southeast of the Project. Suitable habitat is located within stockponds in agricultural and grazing land between Miles 3.0 and 5.0, Bouquet Reservoir, Bouquet Creek, and upstream portions of San Francisquito Canyon. Therefore, this species has a high potential for occurring in the project area.

Birds

Cooper's hawk (*Accipiter cooperii*). The Cooper's hawk is a CSC species. This species typically occurs near woodlands and nests in riparian habitat, oaks, and has adapted to include residential neighborhoods as foraging habitat and sometimes nests in park-like settings. Although no records exist within the Project vicinity, this species likely occurs. Suitable nesting habitat was identified within the riparian habitat that is associated with the drainages that occur throughout the alignment and in the mature landscaped trees that surround the Pardee Substation and other developments in the Santa Clarita area.

Northern goshawk (*Accipiter gentiles*). The northern goshawk is a CSC and a FSS species. This species is an uncommon permanent resident in the mountains of southern California. This species nests in coniferous forests and woodland edges adjacent to open foraging areas. Due to the lack of suitable habitat, this species has a low potential to occur and is unlikely to nest within the ROW.

Sharp-shinned hawk (*Accipiter striatus*). The sharp-shinned hawk is a CSC species and is listed as an MIS by the ANF. This species is associated with riparian habitat, and nests in ponderosa pine, black oaks, riparian deciduous, mixed conifer, and Jeffrey pine habitats. This species is not known to nest in Southern California, although migratory individuals are likely during the winter. Suitable riparian habitat was identified within several of the drainages that occur throughout the alignment. Therefore, migratory individuals have a moderate potential to occur.

Golden eagle (*Aquila chrysaetos*). The golden eagle is a CSC species, a state fully protected species, and a federally protected species under the Bald and Golden Eagle Protection Act of 1940. This species typically occurs in areas of rolling foothill mountains, sage-juniper flats, and desert. This species nests in large, old growth trees in open areas, in cliff-walled canyons, and may utilize transmission line towers. No eagle nests were observed within the existing transmission line towers. Nesting habitat in cliff-walled canyons does not occur within the survey area, and scattered oaks large enough to provide nesting habitat are limited. One golden eagle was observed approximately 3.4 miles southeast of the ROW while driving Bouquet Canyon Road during field surveys. Therefore, the potential for this species to occur within the survey area is high, but nesting eagles within the ROW are unlikely.

Burrowing owl (*Athene cunicularia*). The burrowing owl is a CSC species. This species requires open areas with low-lying vegetation, consisting of dry, sparse grasslands, open desert scrub, and agricultural areas. This species typically utilizes burrows that were started by California ground squirrels. The closest record is from 2003 at the intersection of Avenue I and 120th Street, approximately 2.6 miles northwest of the Antelope Substation (CNDDDB 2005). Two additional locations were recorded in 2003 and 2004 east of the Antelope Substation, within six miles of the Project (CNDDDB, 2005). The grassland habitat between Miles 0.0 and 5.0 provide suitable habitat for this species. In addition, California ground squirrel activity and potential burrow sites were noted immediately adjacent to the Antelope Substation. Open scrub and oak savannah habitats on the north slope of Sierra Pelona may also provide winter habitat for this species. No active owl burrows were noted within or adjacent to the 180-foot ROW during surveys conducted in the project area. However, based on suitable habitat conditions and the migratory nature of this species, over-wintering burrowing owls have a moderate to high potential to occur.

Swainson's hawk (*Buteo swainsoni*). The Swainson's hawk is listed as threatened by the state government and is a FSS species as well as a federal Bird of Conservation Concern (BCC). This species requires open grassland for foraging and nearby sparse stands of trees for nesting. Swainson's hawks typically nest in juniper-sage flats, riparian areas, and oak savannahs. No occurrences have been reported within the proposed Project vicinity. Suitable foraging habitat occurs in the northwest portion of the alignment between Miles 0.0 and 2.8. Scattered oaks occur at the base of the foothills and along drainages between Miles 3.0 and 21.0, primarily within ANF land. Due to the presence of suitable nesting habitat, this species has a moderate potential to occur.

Northern harrier (*Circus cyaneus*). The northern harrier is a CSC species. This species is associated with meadows, marshes, and wetlands and are known to forage in grasslands. This species nests on the ground, typically in shrubby areas on the edges of wetlands. This species was observed foraging in the grassland habitat adjacent to the Antelope Substation. A limited amount of suitable nesting habitat occurs near the stockponds that occur within the agricultural and pasture land that occurs between Miles 3.0 and 5.0.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). The western yellow-billed cuckoo is listed as endangered by the state government, is a candidate for federal listing, and is a FSS and BCC. This species is a rare species in southern California. It nests in dense riparian scrub habitat during the summer. Suitable willow riparian habitat was identified along Bouquet Creek. Isolated riparian habitat patches in Haskell Canyon are unlikely to provide suitable habitat for this species. Marginal riparian habitat occurs within San Francisquito Creek. This species was known to occur along the Santa Clara River, but the most recent records are from 1979. Due to the limited amount of suitable habitat, this species ~~has a low potential~~ is considered unlikely to occur.

Yellow warbler (*Dendroica petechia brewsteri*). The yellow warbler is a CSC species. This species typically occurs in riparian areas with willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. It is also known to nest in montane shrubbery in open conifer forests. This species was detected at Bouquet Creek during focused southwestern willow flycatcher surveys in 2004, approximately 1.8 miles south of Mile 24.0 (Chambers Group 2004a). Suitable riparian habitat was identified surrounding Bouquet Reservoir, along Bouquet Creek, Haskell Canyon, and San Francisquito Canyon. Due to the presence of suitable habitat and known occurrence within 5 miles of the Project, this species has a high potential to occur within riparian areas in the project area.

White-tailed kite (*Elanus leucurus*). The white-tailed kite is a California fully protected species. This species occurs in rolling foothills and valley margins that have scattered oaks, riparian habitat, or marshes next to deciduous woodlands. This species forages in open grasslands, meadows, and marshes, and often nests in dense

tree stands near open foraging areas. Although no records exist for the area, suitable habitat occurs within the riparian drainages that occur throughout the Project area. The riparian habitats surrounding Bouquet Reservoir, San Francisquito Canyon, Bouquet Creek, and Haskell Canyon could support this species. Therefore, this species has a moderate potential to occur.

Willow flycatcher (*Empidonax traillii*). The willow flycatcher is listed as endangered by the state government and is a FSS species. The southwestern subspecies (*E. traillii extimus*) is listed as endangered by the federal government. This species (and subspecies) is a summer resident that occurs in extensive thickets of low, dense willows on the edges of wet meadows, ponds, backwaters, and creeks. The project does not fall within critical habitat for this species (USFWS 2005c). One willow flycatcher was observed carrying nesting material approximately 12.2 miles south of the alignment along the Santa Clara River in 1997 (CNDDDB 2005). A migratory pair of flycatchers was detected during the first 2 of 5 focused surveys in lower Bouquet Canyon Channel within 2 miles of the Project (Chambers Group 2004a). Surveys by the ANF have detected migrant individuals of this species along lower Bouquet Creek but no known nesting locations occur within the proposed Project area (Sue 2005). Suitable willow riparian habitat was identified along Bouquet Canyon Creek. Isolated riparian patches in Haskell Canyon are unlikely to provide suitable habitat for this species. Marginal quality habitat is present in portions of San Francisquito Creek. Due to the limited amount of suitable habitat and proximity to known occurrences, this species has a moderate potential to occur.

California horned lark (*Eremophila alpestris actia*). The California horned lark is a CSC species. This subspecies occurs in coastal regions from Sonoma to San Diego Counties and eastward into the majority of the San Joaquin Valley. This species is associated with open habitat including short-grass prairie, “bald” hills, mountain meadows, fallow grain fields, coastal plains, and alkali flats. Flocks of horned larks were observed within the grassland habitat adjacent to the Antelope Substation during field surveys in July and August. Although the subspecies was not identified, it is assumed that the California horned lark is present on site.

Merlin (*Falco columbarius*). The merlin is a CSC species. It only occurs in southern California as a winter migrant. It is associated with seacoasts, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. This species is an aerial predator that preys on small birds. Although no records for this species occur within the area, suitable foraging habitat occurs throughout the Project area. Therefore, the potential for occurrence of migratory merlins is moderate.

Prairie falcon (*Falco mexicanus*). The prairie falcon is a CSC species and a USFWS Bird of Conservation Concern. ~~This species is also listed as a MIS by the ANF.~~ This species occurs in dry, hilly or level open terrain. Prairie falcons require cliffs for nesting. This species forages for small mammals in open desert scrub, arid areas, and grasslands. No suitable nesting habitat occurs within the Project survey area. Suitable foraging habitat occurs for this species throughout the project areas. Therefore, the potential for occurrence is moderate.

Peregrine falcon (*Falco peregrinus anatum*). The peregrine falcon is listed as endangered by the state government, is a FSS, BCC and California FP species. This species typically occurs in coastal Southern California and prefers habitat near wetlands, lakes, rivers, ocean, and other waters. This species naturally nests on rocky cliffs, but has adapted to include manmade structures such as bridges and building ledges. No occurrences have been reported within the proposed Project vicinity. This species has a low potential to forage in the area and although suitable cliff faces may occur within portions of the ANF, the ROW lacks suitable nesting habitat and this species is unlikely to nest within the proposed ROW.

California condor (*Gymnogyps californianus*). The California condor is listed as endangered by the state and federal governments and is a state FP species. ~~This species is also listed as a MIS by the ANF.~~ The site is not

located within designated Critical Habitat for this species (USFWS 1977). This species requires deep canyons within moderately mountainous areas with clefts in the rocky walls for nesting. Condors require vast expanses of savannah, grasslands, and foothill chaparral for foraging and may forage up to 100 miles from communal roosting and nesting sites. This species was completely removed from the wild by 1987 to start an intensive captive breeding program. Currently, the California condor is being reintroduced to the area. The closest release site occurs at Hopper Mountain, approximately 16.5 miles west of the proposed Project. This species has been seen soaring over the San Gabriel Mountains since its reintroduction (Farris pers. comm.). Suitable nesting habitat does not occur within the ROW, and this species has a low potential to forage within the proposed Project area.

Yellow-breasted chat (*Icteria virens*). The yellow-breasted chat is a CSC species. This species occurs as a summer resident and requires dense willow riparian thickets and other brushy tangles for nesting. These areas typically have a thick understory of willow, blackberry, and wild grape. The closest known occurrence is from 1979 in the Santa Clara River, approximately 8.3 miles west of the Pardee Substation. Suitable willow riparian habitat was identified along Bouquet Canyon Road in the vicinity of Bouquet Canyon Reservoir near the north haul road entrance. Marginal quality habitat is present within portions of San Francisquito and Haskell Canyon. This species has a moderate potential to occur.

Coastal California gnatcatcher (*Poliophtila californica californica*). The coastal California gnatcatcher is listed as threatened by the federal government and is a CSC species. The Project is not located within proposed or final critical habitat for this species (USFWS 1993). This species occurs from south Ventura County to Baja California and is associated with coastal sage scrub habitat that occurs at elevations below 3000 feet. The closest known occurrence is located in Plum Canyon, approximately 4 miles south of the proposed alignment (Farris, USFWS, pers. comm.). Patches of suitable coastal sage scrub habitat occur amongst residential developments between Miles 21.0 and 25.6. Due to the presence of suitable habitat within the known northern extent of this species' range and proximity of known occurrences (within 5 miles of the site), the coastal California gnatcatcher has a high potential to occur in the western portion of the alignment.

California spotted owl (*Strix occidentalis occidentalis*). The California spotted owl is a CSC and a FSS species. ~~This species is also listed as a MIS by the ANF.~~ This species is an uncommon permanent resident of heavily forested areas along the coastal ranges in southern California. The California spotted owl occurs in all major mountain ranges of Southern California, including the San Bernardino, San Gabriel, Tehachapi, Santa Lucia, Santa Ana, Cuyamaca/Laguna, Liebre/ Sawmill Mountain, Mount San Jacinto, Palomar Mountain and the Los Padres Ranges (Noon and McKelvey, 1992). Spotted owls may include portions of the Project ROW within their home ranges as foraging habitat. Therefore, this species has a moderate potential to occur.

Least Bell's vireo (*Vireo bellii pusillus*). The least Bell's vireo is listed as endangered by the state and federal agencies. ~~This species is also listed as a MIS by the ANF.~~ The proposed Project is not located within designated critical habitat for this species (USFWS, 1994). This species is a summer resident and occurs within lowland riparian habitat along waterways and dry washes. This species was recorded in 1988 within Castaic Creek, approximately 2 miles west of the Pardee Substation (CNDDDB 2005). Least Bell's vireos are not known to occur within the proposed Project area (Sue, 2005). Suitable riparian habitat was identified surrounding Bouquet Reservoir, in Bouquet Canyon, Haskell Canyon, and San Francisquito Canyon. Due to the presence of suitable habitat and proximity to historical known occurrences, this species has a moderate potential to occur within riparian areas in the project area.

Mammals

Southern grasshopper mouse (*Onychomys torridus ramona*). The southern grasshopper mouse is a CSC species. This rodent occurs in open coastal sage scrub and annual grassland habitats with low to moderate shrub cover and friable soils for digging. The *ramona* subspecies of the southern grasshopper mouse is restricted to the coastal slope of southwestern California and northwestern Baja California Norte, Mexico. Within California, it apparently now occurs on the coastal and desert slopes of the Transverse Ranges of central Los Angeles County (including the Newhall-Santa Clarita Valley area), southwestern San Bernardino, Orange, and western Riverside counties southward through the Peninsular Range of San Diego County to approximately the Mexican border. The only known record is from 1930 within the ANF approximately 4.7 miles southeast of the Project. This species has a moderate potential of occurring in suitable habitats in the middle and southern portions of the project area.

White-eared pocket mouse (*Perognathus alticolus alticolus*). The white-eared pocket mouse is a CSC and a FSS species. The white-eared pocket mouse is known only from a series of isolated populations in arid yellow pine communities between 3,500 feet and 6,000 feet in the vicinity of Little Bear Valley and Strawberry Peak, San Bernardino Mountains, San Bernardino County. It has not been collected since 1934 (Best, 1994). Its natural history is poorly known, but appears to be a scarce resident in ponderosa and Jeffrey pine habitats, and on the dry floors of open pine forests where bracken ferns grow. It also occupies grassy flats among scattered ponderosa pines and occurs in Joshua tree and pinyon-juniper woodland habitats. At lower elevations, it occurs in chaparral and coastal-sage communities as well as rangelands composed primarily of non-native annual grasses and forbs. Much of its range is used to graze livestock. It also has been found in habitats dominated by Russian thistle (e.g., fallow grain fields) (CDFG, 2005c). Because the known range of the white-eared pocket mouse does not include the Angeles National Forest, this species is unlikely to occur in the project area.

Tehachapi pocket mouse (*Perognathus alticola inexpectatus*). The Tehachapi pocket mouse is a CSC and a FSS species. This rodent occurs in arid annual grassland and desert shrub habitat, but is also known to occur in fallow grain fields. It has been collected from the vicinity of Tehachapi Pass, Kern County on the northeast, to the vicinity of Mount Pinos, Ventura County on the northwest, and the vicinity of Elizabeth Lake, Quail Lake, and Lake Hughes, Los Angeles County on the south. The latter record (1938) is approximately 6.9 miles northeast of the Project (Williams et al., 1993; Best, 1994). Suitable annual grassland occurs between Miles 0.0 and 5.0. Therefore, this species has a moderate potential to occur in the project area.

Los Angeles pocket mouse (*Perognathus longimembris brevinasus*). The Los Angeles Pocket mouse is a CSC and a FSS species. This species inhabits open ground and lower level grasslands and coastal sage associations in the Los Angeles basin with soils composed of fine sands. It often seeks refuge beneath weeds and leaf litter debris and it is thought to rely solely on seeds and grain. Suitable grassland habitat occurs between Miles 0.0 and 5.0 and suitable coastal scrub occurs between Miles 21.0 and 25.6. The proposed Project lies north of the known geographic range of this species, therefore, it is unlikely to occur in the project area.

Mohave ground squirrel (*Spermophilus mohavensis*). The Mohave ground squirrel is listed as threatened by the state government. This species is found in desert scrub and Joshua tree woodlands within the Mojave Desert and is highly associated with winterfat (*Krascheninnikovia lanata*) and spiny hopsage (*Grayia spinosa*). The closest known occurrences are east of Sierra Highway and east of Highway 14, approximately 9.5 miles from the proposed Project. Although this species occurs on either side of Highway 14 in the northern part of its range, this species is not known to occur in the proposed Project vicinity (west of Highway 14) in the southernmost part of its range. No suitable habitat was found within the proposed alignment; therefore, Mohave ground squirrels are unlikely to occur.

American badger (*Taxidea taxus*). The American badger is a CSC species. It occurs in most stages of shrub, forest, and herbaceous habitat, especially desert scrub habitat with friable soils and low to moderate shrubs. The closest and most recent known occurrence is from 1988 near Lake Hughes, approximately 7.3 miles northwest of the site. Suitable habitat occurs throughout the chaparral and scrub habitat. Therefore, this species has a moderate potential to occur.

Pallid bat (*Antrozous pallida*). The pallid bat is a CSC and a FSS species. This species of bat occurs in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests. Pallid bats are most common in open, dry habitats with rocky areas for roosting. Suitable habitat for this species occurs throughout the alignment; however rocky crevices for roosting are limited within the survey area. Therefore, this species has a moderate potential for occurrence.

Townsend's big-eared bat (*Corynorhinus townsendii*). The Townsend's big-eared bat is a CSC and a FSS species. This species of bat occurs in a variety of habitats and roosts in the open, hanging from walls and ceilings. Although there are no known occurrences for this species in the Project vicinity, suitable habitat for this species occurs throughout the alignment. Therefore, this species has a moderate potential for occurrence.

Spotted bat (*Euderma maculatum*). The spotted bat is a CSC species. This species of bat occurs in a variety of habitats including deserts, grasslands, and mixed conifer forests. Spotted bats require cliffs or caves for roosting. The only known record is from 1890 at the mouth of Castaic Creek, within 5 miles of the Pardee Substation. Suitable habitat for this species occurs throughout the alignment, although cliffs and caves were not detected within the survey area. Therefore, this species has only a moderate potential for occurrence.

Western red bat (*Lasiurus blossevilli*). The western red bat is a CSC and a FSS species. This species of bat occurs in a variety of habitats and roosts primarily in trees from sea level up through mixed conifer forests. Although there are no known occurrences for this species in the Project vicinity, suitable mature trees for this species to roost in occur throughout the alignment. Therefore, this species has a moderate potential for occurrence.

Raptors and Migratory Birds

Stick nests were observed on several of the existing transmission line towers that occur within and adjacent to the proposed Project ROW. The nests were inactive at the time of the survey, but it is assumed that they belong to common ravens and red-tailed hawks. These species likely utilize these nests on an annual basis. Migratory birds are likely to nest within the various habitat types that occur throughout the survey area.

Management Indicator Species

The National Forest Management Act of 1982 requires that the USDA Forest Service address Management Indicator Species (MIS) during the development of forest plans (USDA 2005). These species are selected because their population or habitat trends are believed to indicate the effects of management activities on NFS lands (36 CFR 219.19(a) (1) [1982]; 36 CFR 219.14 [2005]), and as a focus for monitoring (36 CFR 219.19(a) (6) [1982]). On the ANF the following habitat types and management issues have been assigned an indicator species as a measure of management success. These include:

- Healthy Diverse Habitats (Mule deer)
- Fragmentation (Mountain lion)
- Montane Conifer Forest (California spotted owl, California Black oak, and White fir)
- Riparian Habitat (Song sparrow)
- (Aquatic Habitat) Arroyo toad
- Oak Regeneration (Blue oak, Engleman oak, and Valley oak)
- Bigcone Douglas-fir Forest (Bigcone Douglas-fir)
- Coulter Pine Forest (Coulter pine)

Healthy Diverse Habitats (Mule Deer). Mule deer are common on the ANF and much of the proposed Project ROW on NFS Lands support habitat that could be utilized by this species. These animals occupy a wide range of habitats but prefer to forage and shelter near riparian areas, seeps, and oak woodlands. While these species occupy most habitats late successional chaparral typically is not preferred for foraging. Mule deer on NFS lands use dense vegetation for cover and forage mainly in the open sagebrush and edge habitats that occur along the route. These species are able to move along an elevational gradient to maximize use of climatic conditions and forage availability during different seasons. Movement usually occurs in the fall and spring and roughly the same routes are used by the same herds year after year. On the ANF, the current deer herd is believed to include approximately 2,180 mule deer (USDA 2005). Mule deer have been chosen as an indicator of the effectiveness of forest management strategies on landscape patterns in chaparral age class diversity (USDA 2005).

Fragmentation (Mountain lion). The mountain lion (*Puma concolor*) is selected as an MIS to monitor the effects of forest activities and uses on a landscape-level scale to determine effects of habitat fragmentation and habitat linkages (USDA, 2005). The general health of this species largely depends on current deer populations and this solitary animal prefers large areas of undisturbed habitat that supports a stable prey base. Populations of this species on NFS lands are low primarily because this species requires large home ranges and has limited social interaction (USDA, 2005). The greatest concern to this species is loss of habitat and connectivity between home ranges. Suitable range for this species occurs in the proposed Project ROW and this species is expected to be present in the area.

Montane Conifer Forest (California spotted owl, California black oak, and White fir). The California spotted owl is an uncommon permanent resident of heavily forested areas along the coastal ranges in southern California. The California spotted owl occurs in all major mountain ranges of Southern California, including the San Bernardino, San Gabriel, Tehachapi, Santa Lucia, Santa Ana, Cuyamaca/Laguna, Liebre/ Sawmill Mountain, Mount San Jacinto, Palomar Mountain and the Los Padres Ranges (Noon and McKelvey, 1992). Spotted owls may include portions of the Project ROW within their home ranges as foraging habitat. The California spotted owl make is an ideal indicator of the health of montane conifer forests, as this species requires the presence of “mature, large diameter, high canopy stands with densely shaded understory” for successful population growth.

White fir and California black oak are components of Montane conifer forests which are habitats dominated by varying combinations of ponderosa pine (*Pinus ponderosa*), Jeffrey pine (*P. jeffreyi*), white fir (*Abiesconcolor* var. *lowiana*), black oak (*Quercus kelloggii*), canyon live oak (*Q. chrysolepis*), sugar pine (*P. lambertiana*), incense cedar (*Calocedrus decurrens*), and western juniper (*Juniperus occidentalis* var. *occidentalis*) (USDA, 2005). These MIS species was selected to assist the ANF is determining whether current management activities are changing the composition of montane coniferous forests to pre-fire suppression conditions (USDA, 2005). As the white fir is a shade-tolerant species it is an indicator of forest stand desnsification and a return to historic conditions. The black oak is a gap-phase species that requires occasional openings in the forest canopy and the increased presence of saplings would indicate the presence of opportunities for light-requiring species (USDA 2005).

Riparian Habitat (Song sparrow). The song sparrow is selected as an MIS because its relative abundance is expected to be responsive to disturbance or management activities. The primary threat to the song sparrow and other riparian birds is the destruction of habitat, loss of water in riparian areas, and human disturbance (USDA 2005). Long term monitoring of song sparrow populations will provide a measure of forest management success in increasing the quality of riparian areas.

Aquatic Habitat (Arroyo toad). The proposed Project is not located within the designated critical habitat for this species (USFWS, 2005b). The arroyo toad occurs in semi-arid regions including valley-foothill, desert riparian, and desert wash habitat. This species breeds in shallow, gravelly streams, and rivers with sandy banks that typically contain willows, cottonwoods, and sycamores, and it has been known to utilize upland habitat within 2000 meters (6,562 feet) of breeding habitat for foraging and wintering (USFWS, 2005b).

This species is not expected to occur in the proposed Project ROW on NFS lands. The closest CNDDDB occurrence was recorded just east of Interstate 5 within the Santa Clara River in 1994 (CNDDDB, 2005). Suitable habitat for this species is present within the ROW at San Francisquito Creek. San Francisquito Creek joins the Santa Clara River 2.1 miles downstream from the ROW, and the reported arroyo toad location is within ½-mile of this confluence. There are known locations within San Francisquito and Castaic Creek watersheds, and this species may occur in the Bouquet Canyon Creek watershed. Suitable habitat is also present within the ROW in Haskell Canyon; however channelization of the creek between the ROW and Bouquet Junction makes the expansion of arroyo toads from the Santa Clara River into this area very unlikely. The Arroyo toad was chosen as an indicator of the health of aquatic habitat on the ANF.

Oak Regeneration (Blue oak, Engelman oak, and Valley oak). Blue oak is a deciduous tree that occurs in the interior coast ranges in monotypic stands or with coast live oak or valley oak (USDA, 2005). Some blue oak woodlands can also occur on serpentine soils (Stephenson and Calcarone, 1999). Valley oak is the largest deciduous tree in the western United States and typically occupies valley floors and lower foothill communities with a grass-dominated understory on deep soils with a shallow depth to perennially available soil moisture (USDA, 2005). This species can form the dominant vegetation layer along semi moist drainages and form oak riparian woodlands. Engelmann oak, a deciduous species, has a small natural range and is the only species of subtropical white oaks in California (USDA, 2005). This species most commonly occurs in savannas with grassland understory on valley floors, foothill slopes and raised stream terraces within riparian corridors in the northwestern Peninsula Range in San Diego and Orange counties (Sawyer and Keeler-Wolf, 1995). These MIS have been chosen as indicators of oak regeneration within the Angeles National Forest. Monitoring of these species, in particular saplings, will measure the success of the forest management strategies (USDA, 2005).

Bigcone Douglas-fir Forest (Bigcone Douglas-fir). This MIS is often observed in association with canyon live oak and typically occurs on mesic sites such as shaded canyons and draws and steep north- and east-facing aspects (USDA, 2005). This MIS provides habitat for the California spotted owl and a variety of other wildlife and was selected as an obvious indicator of forest health due to its susceptibility to increased fire frequency and severity (USDA, 2005).

Coulter Pine Forest (Coulter pine). Coulter pine is a major component of lower montane forests and range from 3,950 to 5,900 feet in elevation (1,200 to 1,800 meters) (USDA 2005). This plant community is typically associated with canyon live oaks and often intergrades with chaparral at lower elevations and with ponderosa pine and black oak at higher elevations in the Transverse and Peninsular ranges. The Coulter pine was selected as an MIS because of its broad habitat distribution and susceptibility to mortality from fire, drought, and bark beetle infestations. On the ANF approximately 4,367 acres of this community type are present. Coulter pine is not expected to occur in the designated utility corridor for the proposed Project.

C.3.1.3.5 Wildlife Corridors and Special Linkages

Linkages and corridors facilitate regional animal movement and are generally centered around waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Drainages generally serve as movement corridors because wildlife can move easily through these areas, and fresh water is available.

Corridors also offer wildlife unobstructed terrain for foraging and for dispersal of young individuals. Ridgelines that occur throughout the project may also serve as movement corridors.

Approximately 12.6 miles of the 25.6 mile alignment occurs on NFS lands and supports a continuous area of open space. Although several drainages and ridgelines occur that may be considered wildlife movement habitat, they do not provide a connection between two separate areas of open space. Rather, they provide for movement of individuals within the preserved open space in the ANF. San Francisquito Canyon, Haskell Canyon, and Bouquet Canyon connect with portions of the proposed Project ROW and these larger drainages serve as wildlife movement corridors. All three connect the northern portion of the ANF to the Santa Clara River system, which eventually leads to the southern portion of the ANF or coastal mountain ranges and open space.

C.3.1.3.6 Jurisdictional Waters

Several State and federal waterways occur throughout the proposed alignment in addition to multiple jurisdictional drainages occurring throughout the steep terrain along the proposed alignment. Potential wetland habitat was also noted along Amargosa Creek in Leona Valley and in Bouquet Creek. Some of the jurisdictional waterways that occur within and adjacent to the proposed alignment include Bouquet Canyon Creek, Bouquet Canyon Reservoir, Haskell Canyon Creek, and San Francisquito Canyon Creek. Many of the small intermittent or ephemeral drainages that support these waterways may also qualify as jurisdictional habitat.

C.3.2 Regulatory Framework

C.3.2.1 Federal

National Environmental Policy Act (42 U.S.C. 4321 et seq.). NEPA declares a continuing federal policy “to use all practicable means and measures...to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations.” See Section E.2 for a detailed discussion of this regulation.

Endangered Species Act of 1973 (16 U.S.C. 1531-1543). The Endangered Species Act (ESA) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. (See Section E.2. for a detailed discussion).

Migratory Bird Treaty Act (16 U.S.C. 703-711). The Migratory Bird Treaty Act (MBTA) is a treaty with Canada, Mexico and Japan that makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. The Act states that it is unlawful to take, pursue, molest, or disturb bald (American) and golden eagles, their nests, or their eggs anywhere in the United States.

Clean Water Act (33 U.S.C. 1251-1376). The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation’s waters. See Section E.2 for a detailed discussion of this regulation.

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

based on the effects on navigation. Most activities covered under this act are also covered under Section 404 of CWA.

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

Angeles National Forest Land Management Plan. The ANF Land Management Plan states that one of the desired condition is that habitats for federally listed species are conserved and are recovered or are moving toward recovery. Habitats for sensitive species and other species of concern are managed to prevent downward trends in populations or habitat capability, and to prevent federal listing. Habitat conditions sustain healthy populations of native and desired non-native fish and game species. Vegetation condition is managed toward desired conditions (Forest Plan, Part 1, p. 45). When reviewing new projects in riparian areas, apply the 5-step Project Screening Process for Riparian Conservation Areas (Forest Plan, Part 3, p. 11). Protect known active and inactive raptor nest areas. When appropriate, a not disturbance buffer around active nest sites will be required from nest-site to fledgling (Part 3, p. 7). Include provisions for raptor safety when issuing authorizations for new powerlines (Part 3, p. 9). Implement projects to minimize the presence or spread of invasive non-native plants (Part 1, p. 32). To prevent the introduction and control invasive species, limit ground disturbance to the minimum area necessary during project activities, implement the Noxious Weed Management Strategy (Part 3, p. 100). ANF will actively pursue status determination and long term protection for sensitive plants. Riparian zone standards and guidelines apply to aquatic, wetland, and upland riparian zones for areas above the high water mark whether mapped or not, and a 100-foot buffer zone will be allotted to all bodies of water. All activities shall not result in more than 30 percent reduction in the potential ground cover vegetation within riparian zones at any given time. Construction and reconstruction of existing facilities can occur in a riparian zone only when any unacceptable conflicts or impacts will be mitigated, and riparian-dependent resources can be protected. New roads for utility corridors including within riparian areas will only be allowed where necessary. Utility companies will adhere to the practices recommended in the document “Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1981,” Raptor Research Report No. 4, or the most current version (updated in 1996).

Fish and Wildlife Coordination Act (16 U.S.C. 661-666). This act applies to any federal project where the waters of any stream or other body of water are impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with FWS and the appropriate state wildlife agency. These agencies prepare reports and recommendations that document project effects on wildlife and identify measures that may be adopted to prevent loss or damage to wildlife resources. The term “wildlife” includes both animals and plants. Provisions of the Act are implemented through the NEPA process and Section 404 permit process.

National Wild and Scenic Rivers Act (16 U.S.C. 1271-1287). This act is administered by a variety of State and federal agencies. See Section E.2 for a detailed discussion of this regulation.

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

Executive Order 11988 Floodplain Management (May 24, 1977). This order directs all federal agencies to avoid the long-term and short-term adverse impacts associated with floodplain modification and to avoid direct or indirect support of floodplain development whenever there is a practicable alternative.

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

C.3.2.2 State

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

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

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

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

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

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

C.3.2.3 Local

Los Angeles County General Plan. This plan sets policy direction for the open space related resources of Los Angeles County. These policies are based on the need to conserve natural amenities, protect against natural hazards, and meet the public's desire for open space experiences. To protect areas of significant natural resources, the county recommends the retention of these areas in non-urban or open space use. Special emphasis is placed on protection of hillside character and significant ecological areas. The county's biotic resources can be broken into four geographic areas including (1) coastline, (2) hill and mountain ranges, (3) desert, and (4) lowlands and inland valleys. Each of these geographic regions has an associated ecologic unit. The county has identified more than 60 significant ecological areas (SEAs) that represent a wide range of biotic communities. These areas also have stringent development standards associated with each. SEAs will be preserved by appropriate measures, including, preservation, mitigation, and enhancement. The protection of watersheds, streams, and riparian vegetation in Los Angeles County will assist in minimizing water pollution, soil erosion and sedimentation, maintain natural habitats, and will also aid in ground water recharge. The County's oak tree ordinance prohibits the damage or removal of any oak tree that is greater than 25-8 inches in circumference when measured at 4.5 feet off the ground without a permit.

Antelope Valley Areawide General Plan. This plan requires the minimizing disruption and degradation of the environment, integrating land uses with natural environmental systems, instituting measures to mitigate the impacts of environmental hazards, and prohibiting expansion of urban uses into areas of rare and endangered species. It promotes the designation of significant plant and wildlife habitats as SEAs, preservation of biotic diversity in the valley by designating rare and unique plant and animal SEAs and the measures for their protection, and adding new SEAs when appropriate. If projects have the potential to impact biotic resources, a biological assessment will be required. This plan requires the establishment of an open space network and prohibits the harvesting of Joshua trees or juniper trees for fuel or for their relocation out of its normal habitats. Management plans will be developed for MIS (Management Indicator Species) in cooperation with CDFG, standing dead trees will be maintained at reasonable density providing nesting habitat for raptors and other predators; interim management plans will be created when actual recovery plans do not exist.

City of Lancaster General Plan Policy Document. This plan requires the identification of all significant resources and development of strategies to preserve the resources including sensitive vegetation communities such as desert woodlands and Joshua trees.

City of Santa Clarita General Plan. This plan requires the preservation of natural resources and special natural features which define the Santa Clarita planning area and give it its distinct form and identity. This action includes protection of significant ecological resources and ecosystems, including but not limited to, sensitive flora and fauna habitat areas. The plan requires protection and restoration of suitable habitat for the unarmored threespine stickleback and protection of habitat suitable for the recovery of the stickleback. The plan includes compliance with Los Angeles County's oak tree ordinance. Construction restrictions include ~~avoidance of construction during breeding and migration periods,~~ avoiding disturbance of areas that would remove

watershed vegetation, minimizing excavations that would result in changes in the stream flow or increase siltation, and preventing activities that would contribute pollutants to the water of San Francisquito Creek and the Santa Clara River.

San Francisquito Canyon Significant Ecological Area No. 19. SEA No. 19 requires measures to protect and/or enhance surface hydrology of San Francisquito SEA which is considered a mitigation bank for the unarmored threespine stickleback. Protective measures include controlling increased peak flows and volumes into San Francisquito Creek, minimizing nuisance flows into the creek, minimizing velocity of flows into the creek, protecting stormwater, nuisance flows, and groundwater flows, minimizing erosion and sedimentation, and minimizing the flow of trash and debris into San Francisquito Creek. Measures to avoid direct impacts to the unarmored threespine stickleback include protection and restoration of suitable habitat for the UTSS and protection of habitat suitable for the recovery of the species. The plan requires the restoration of riparian areas within the SEA.

West Mojave Plan. This is a proposed habitat conservation plan (HCP) considering several endangered and threatened species and their specific habitat requirements. From this information, habitat conservation areas (HCA) and desert wildlife management areas (DWMA) will be established and protected for the overall survival and betterment of each species. Due to the overlap of habitat requirements for individual species, multiple species often benefit from these HCAs and WMAs. A raptor conservation strategy has also been adopted to address the threat to raptors at their nests and of electrocution from electrical distribution lines. These are proactive measures applicable to all new utility line construction throughout the planning area. A variety of methods are available, including increasing spacing of conductors, different placement of conductors on crossbars, insulation of certain conducting links, and installation of artificial perches or perch guards. Approved raptor-safe designs contained with the industry and scientist joint publication “Suggested practices for raptor protection on power lines: The State of the Art in 1996” (APLIC 1996) would be required for all new electrical distribution lines in the entire planning area.

C.3.3 Significance Criteria

C.3.3.1 Criteria for Determining Significance

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

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

- Criterion BIO1: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS.
- Criterion BIO2: Have an adverse effect, either directly or through habitat modifications, on any species listed as endangered, threatened, or proposed or critical habitat for these species.
- Criterion BIO3: Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG, USFWS, or USDA Forest Service.
- Criterion BIO4: 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.

- Criterion BIO5: 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.
- Criterion BIO6: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances.
- Criterion BIO7: Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP.

C.3.4 Applicant-Proposed Measures

This section presents the Applicant-Proposed Measures (APMs) designed by SCE to reduce impacts of the proposed Project to biological resources. These APMs are incorporated into the project description and considered part of the proposed Project and, as applicable, and each alternative. APMs are separate from mitigation measures, which are proposed in addition to the project description for the purpose of mitigating significant impacts. If the proposed Project or an alternative is approved, these measures in addition to the mitigation identified in the EIS/EIR will be monitored by the CPUC and the USDA Forest Service. Table C.3-4 presents a list of the APMs related to biological resources.

Measure Number	SCE-Proposed Measure
APM BIO-1	SCE would perform pre-construction clearance surveys to help ensure that no special-status plants or wildlife species are negatively impacted by construction.
APM BIO-2	Every effort would be made to minimize vegetation removal and permanent loss at construction sites. If necessary, native vegetation would be flagged for protection.
APM BIO-3	Construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible. If necessary, SCE would secure a Streambed Alteration Agreement (SAA) from California Department of Fish and Game. Impacts would be mitigated based on the terms of the SAA. No streams with flowing waters and capable of supporting special-status species are expected to be impacted by the project.
APM BIO-4	Crews would be directed to use Best Management Practices (BMPs) where applicable. These measures would be identified prior to construction and incorporated into the construction operations to the fullest extent possible.
APM BIO-5	SCE would assign Biological Monitors to the Project. They would be responsible for ensuring that impacts to special-status species, native vegetation, wildlife habitat, or unique resources would be minimized to the fullest extent possible. Where appropriate, monitors would flag the boundaries of areas where activities need to be restricted in order to protect native plants and wildlife, or special-status species. These restricted areas would be monitored to ensure their protection during construction.
APM BIO-6	SCE would implement a worker environmental awareness training program to ensure that construction personnel are aware of the environmental conditions that must be adhered. All field construction personnel would be required to sign a statement that they agree to comply with all environmental protection measures associated with the project.
APM BIO-7	If it is determined that unanticipated significant and unavoidable impacts occurred to any special-status resources, SCE would purchase lands or otherwise enhance habitat to compensate.

C.3.5 Impact Analysis: Proposed Project/Action

C.3.5.1 Impacts and Mitigation Measures

The proposed Project could result in temporary disturbance and/or permanent loss to sensitive vegetation communities, rare plant communities, and sensitive plant and animal species. Temporary disturbance includes short-term impacts during construction of new pole structures and removal of existing towers, construction of new access roads and improvements to existing access roads (approximately 12 miles of roads with a total of

approximately 25 acres of permanent impacts), and work at conductor tensioning/splicing and staging/laydown areas. The proposed Project is currently expected to require approximately 24 pulling stations and 15 splicing stations (approximately 6 acres of temporary disturbance). Permanent loss involves long-term impacts associated with permanent project features (e.g., new transmission towers) that would remain throughout the life of the project. See Section B.2.2.1 for a complete breakdown of potential impacts from these activities. Examples of activities that would result in impacts to sensitive vegetation communities include:

- Installation of new 500 kV circuit steel lattice tower and tubular steel pole structures (177 new towers)
- Expansion of the existing Antelope Substation
- Removal of the existing 66-kV subtransmission lines, towers and ancillary improvements including the foundations on NFS lands
- Construction staging and laydown areas (4 staging areas, 20 acres all on non-NFS lands)
- Construction and improvement of access and spur roads (approximately 12 miles, 25 acres of permanent impacts)

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

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

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

Each of these activities could cause temporary damage to existing vegetation, but would not likely involve removal or substantial disruption of surface soils. The most common type of surface disturbance is associated with rubber-tired or steel-tracked vehicles used to string/pull the line and transport personnel and materials along the proposed Project ROW. Potential impacts to plant communities could also be caused by the movement of construction/maintenance vehicles and equipment within the proposed Project transmission line ROW. Impacts could include soil compaction and crushing of vegetation. Surveys of areas to be permanently and temporarily impacted by the proposed Project will be conducted prior to construction. Not all plant communities are equally sensitive to surface disturbance, not all of these impacts would occur in every plant community, and such disturbance would be limited to areas where other existing surface roads are not available.

Impacts on Riparian or Sensitive Natural Communities (Criterion BIO1)

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

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

Depending on the site specific topography, these impacts may extend beyond the ROW unless precautions are taken. The removal of common native vegetation types, such as coastal sage or chaparral creates possibilities

for erosion or weed invasion that can affect adjacent and downslope habitats. As such, it is the indirect, off-ROW impacts associated with the removal of native vegetation that may be significant. ~~Removal or incidental loss of sensitive species or individual native specimen trees would also be considered a significant impact.~~

The proposed Project would result in both temporary and permanent impacts to non-native grasslands, disturbed habitat, coastal sage scrub, and chaparral communities in the proposed Project ROW. Ground-disturbing activity, including tower pad preparation and construction, grading of new or improved access and spur roads (25 acres of permanent disturbance), tower removal, transportation, and the use or improvement of existing access roads has the potential to disturb vegetation. These activities would result in the disturbance of approximately 122 acres of land (inclusive of native and non-native vegetation). An estimated 63.3 acres would consist of temporary impacts and approximately 58.5 acres would be permanent (22.1 acres on NFS lands). Table B.2-6 contains a detailed account of the potential impacts associated with these activities. The use of helicopter construction techniques, which would increase as a result of Mitigation Measure V-4a (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), for towers located on steep or inaccessible areas, may also occur and would likely minimize ground disturbance and erosion potential on NFS lands.

Riparian areas occur in several of the proposed Project areas including adjacent to the access roads at Bouquet Reservoir, San Francisquito Creek, and in Haskell Canyon. Riparian vegetation also occurs at the quarry haul road (6N19) proposed secondary access road) at Bouquet Canyon Creek. ~~Although these SCE has indicated that these drainages would be spanned by the high voltage lines, and the disturbance or removal of riparian communities would not occur~~ be avoided or minimized, riparian habitat could be permanently removed by the proposed Project if the expansion of the existing access roads is required in areas where riparian habitat occurs. Activities that involve modification of the bed or bank of a State jurisdictional waterway would be regulated by the CDFG, Regional Board, and USACE. To comply with the National Forest Land Management Plan (Forest Plan) no construction would occur in Riparian Conservation Areas (RCA's). ~~SCE has indicated that Implementation of APM BIO-3, (Obtain a Streambed Alteration Agreement) would require SCE to obtain a Streambed Alteration Agreement from the CDFG, if applicable, to reduce impacts to State jurisdictional waters and associated riparian vegetation on non-NFS lands.~~ The permanent loss or temporary disturbance of native vegetation communities would be considered a significant impact without mitigation. However, the implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), B-1b (No Activities will occur in Riparian Conservation Areas), described below, and Mitigation Measure R-4 (Permanent Closure and Re-vegetation of Construction Roads) described in Section C.9, Land Use and Public Recreation, would reduce this impact to a less-than-significant level (**Class II**).

Mitigation Measure for Impact B-1

B-1a Provide Restoration/Compensation for Impacts to Native Vegetation Communities (chamise chaparral, coastal sage scrub, and riparian, if affected). SCE shall have a qualified restoration biologist prepare a Habitat Restoration and Revegetation Plan for the project. Plans for restoration, enhancement/re-vegetation and/or creation should be prepared by persons with expertise in southern California ecosystems and native plant re-vegetation techniques. The plan should include at minimum: (a) the location of the mitigation site; (b) the plant species to be used; (c) a schematic depicting the mitigation area; (d) time of year that the planting will occur; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met. The plan shall be designed to meet the success criteria identified in the Forest Plan which requires restoration goals to be achieved within three years of implementation.

SCE shall utilize a CPUC/Forest Service approved seed mix to revegetate areas disturbed by construction activities. This mix should consist of native, locally-occurring species collected from local seed sources~~the Del Sur Ridge~~. Restoration shall include the revegetation of stripped or exposed work and/or mitigation areas with vegetation native to the area. No commercially purchased seeds will be accepted unless the collection source is the Del Sur Ridge and must be certified to be free of noxious weeds. Revegetation shall include ground cover, grass, shrub, and tree species in order to match disturbed areas to surrounding conditions and to restore or improve wildlife habitat quality to pre-project or higher levels. The plan also shall include a monitoring element spanning a minimum of five years post-planting. SCE shall restore temporarily disturbed areas, including existing 66-kV tower locations that are to be removed by the Project, to pre-construction conditions following construction.

Permanent impacts outside of the NFS lands shall be mitigated at a ratio to be determined by the CPUC. Within ANF upland vegetation and ephemeral washes with permanent impacts will be mitigated at a ratio of 3:1. Temporary impacts will be replaced at a ratio of 1:1. If the temporary impacts are greater than 3 years then add 0.5 for each year over three years. Permanent impact to mulefat scrub, willow scrub, willow riparian woodland, cottonwood riparian woodland, alder woodland and sycamore woodland will be replaced at a ratio of 5:1. Temporary impacts to the scrub communities will be replaced at a 1:1 ratio. Temporary impacts to woodland communities will be replaced at a 2:1 ratio. Where onsite restoration is planned for mitigation of temporary impacts to sensitive vegetation communities, SCE shall identify a Habitat Restoration Specialist to be approved by the CPUC/Forest Service to determine the most appropriate method of restoration.

The creation or restoration of habitat shall be monitored for five years after mitigation site construction to assess progress and identify potential problems with the restoration site. Remedial activities (e.g. additional planting, removal of non-native invasive species, or erosion control) shall be taken during the five-year period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the five-year maintenance and monitoring period, monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise noted by the CPUC/Forest Service. If a catastrophic event occurs, such as a fire, there will be a one time replacement. If a second catastrophic event occurs, no replanting is required.

B-1b **No Activities will occur in Riparian Conservation Areas.** The final project design will include protective measures where no activities will occur on NFS lands in Riparian Conservation Areas in compliance with the Forest Plan. Examples of activities that will NOT be allowed include ground disturbance, adding potable water to these areas while implementing erosion control measures, and removing water from the waterways.

Impact B-2: The Project would cause temporary damage or permanent loss of oak trees.

Access to the proposed Project ROW would occur primarily on existing roads. Some grading may be required in areas where the road requires widening or where erosion has compromised the roads. Approximately 12 miles of new or improved access and spur roads would also be created in areas currently without access. Road grading in Haskell Canyon could result in potential impacts to Coast Live Oak Riparian Forest habitat. The majority of this sensitive natural community occurs in Haskell Canyon, which already has several existing roads, some of which are subject to erosion during winter storms. Impacts to most oak trees would likely be avoided through implementation of APM BIO-2 (Minimize vegetation removal and flag for avoidance) to reduce impacts to sensitive vegetation. However, because several of the existing roads occur under the dripline of oak trees, avoidance of construction activities within the oak tree canopy may not be feasible. Repair or widening of existing roads to support construction equipment that occurs under the canopy of oak trees may result in damage

to individual trees, limbs, and/or their root systems potentially causing mortality through water stress. Any disturbance to individual oak trees greater than 8 inches DBH is considered a significant impact prohibited without first obtaining a permit under the Los Angeles County oak tree ordinance. Impacts to oak trees would likely be avoided through implementation of APM BIO-2 (Minimize vegetation removal and flag for avoidance) to reduce impacts to sensitive vegetation. In addition to APM BIO-2, implementation of Mitigation Measure B-2 (Restoration of Coast Live Oak Trees) would reduce this impact to a less-than-significant level (**Class II**).

Mitigation Measure for Impact B-2

B-2 Restoration of Coast Live Oak Trees. Construction within the driplines of oak trees, and incidental trimming or damage to trees along the proposed route shall not occur until the trees are evaluated by a qualified arborist, who shall identify appropriate measures to minimize tree loss including the placement of fence around the dripline, padding the truck, and the placement of matting under the existing dripline during construction activities. If construction, trimming, or incidental trimming leads to damage or the removal of any coast live oak, ~~California black walnut and western sycamore~~ they shall be replaced in kind at a 10:1 ratio. Valley oaks shall be replaced in kind at a 15:1 ratio. ~~Elderberry, cottonwood, and willows shall be replaced at a 5:1 ratio.~~

On the ANF any oak or native tree which must be removed or killed as a result of construction or other project-related activities shall be replaced in kind. The replacement ratios (using rooted plants in liners or direct planting of acorns) for plants which are to be removed shall be as follows: plants less than 5 inches DBH shall be replaced at 3:1; plants from 5 to 12 inches shall be replaced at 5:1; trees from 12 to 24 inches shall be replaced at 10:1; trees from 24 to 36 inches shall be replaced at 15:1; all oaks greater than 36 inches shall be replanted at a ratio of 20:1. The replacement ratio for damaged trees shall be 2:1 for plants with DBH less than 12 inches and a 5:1 ratio for plants with DBH greater than 12 inches. Trees shall be at least 5 years old and capable of surviving without further maintenance. Compliance shall be evaluated 5 years after tree removal. Trees shall be planted at locations acceptable to the landowner or managing agency. All planting locations, procedures, and results shall be evaluated by a qualified arborist.

On non-NFS lands all protection and replacement measures shall be consistent with applicable local jurisdiction requirements, such as the Los Angeles County Oak Tree Ordinance. Tree removal shall not be permitted until replacement trees have been planted or transplanting sites are approved.

Impact B-3: The Project would cause loss of foraging habitat for wildlife.

Non-native grassland habitat, pasture, and agricultural land occur between Mile 0.0 and 5.0. Although these communities often replace native vegetation communities with invasive non-native plant species, they function as habitat for a variety of native wildlife species and serve as foraging habitat for many birds of prey. Installation of new tower locations would result in the permanent removal of native and non-native vegetation communities including chaparral, coastal sage scrub, and non-native grassland. Temporary and permanent loss of native vegetation communities that provide foraging habitat for raptor species would be considered a significant impact without mitigation. However, impacts to foraging habitat would be primarily temporary and raptors typically forage over wide areas. In addition, transmission line towers are often utilized by raptors, such as the Swainson's hawk, red-tailed hawk, and peregrine falcon, and they may improve the foraging opportunities for these species by providing roosting or nesting sites. Implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), as described above for Impact B-1, would reduce Impact B-3 to a less-than-significant level (**Class II**).

Impact B-4: The Project would introduce non-native and invasive plant species.

The introduction of non-native plant species is a special concern for native plant communities and is recognized by the Forest Service as a threat to native vegetation communities and wildlife. Non-native plants pose a threat to the natural processes of plant community succession, fire frequency, biological diversity and species composition. The survival of some populations of special status species could be adversely affected by the success of an introduced plant species. The proposed Project would temporarily remove chaparral, coastal sage scrub and non-native grassland at each tower. Potential introduction of non-native plant species would occur primarily during construction, but would also continue to occur during operation and maintenance phases of the proposed Project. The introduction of non-native or noxious weeds would be related to the use of vehicles, construction equipment, or earth materials contaminated with non-native plant seed, use of straw bales or wattles that contain seeds of non-native plant species, and enhanced public access to the project corridor during and after construction.

The Project area, including NFS lands contains several invasive species, including yellow star thistle, Spanish broom, and Russian thistle. The introduction or spread of non-native plant species would be considered a significant impact without mitigation. The introduction and spread of non-native plant species normally occurs where lands have been disturbed and are accessible to either motorized or non-motorized activity. Implementation of the Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), B-4 (Implement Weed Control Measures) and R-4 (Permanent Closure and Re-vegetation of Construction Roads) would reduce potential impacts from the introduction of non-native plant species to a less-than-significant level (**Class II**).

Mitigation Measure for Impact B-4

B-4 Implement Weed Control Measures. SCE shall adhere to the USDA Forest Service management guidelines for reducing the potential for the introduction of invasive, non-native plant species in the ANF by implementation of the following standards:

- SCE SHALL WASH ALL EQUIPMENT AND VEHICLES: Vehicles and all equipment must be washed BEFORE AND AFTER entering all project sites. This includes wheels, undercarriages, bumpers and all parts of the vehicle. In addition, all tools such as chain saws, hand clippers, pruners, etc must also be washed BEFORE AND AFTER entering all project sites. For example, vehicles traveling into contaminated areas are the main dispersal mechanism for yellow star-thistle. All washing must take place where rinse water is collected and disposed of in either a sanitary sewer or a landfill.
- Erosion control measures utilized on the project shall be certified weed free.
- SCE SHALL KEEP WRITTEN LOGS: When vehicles and equipment are washed, a daily log must be kept stating:
 - Location
 - Date and time
 - Methods used
 - Staff present
 - Equipment washed
 - Signature of responsible crew member
- These written logs will be turned in to the Forest project manager and Forest Botanist on a weekly basis.
- SCE will monitor areas that have been temporarily or permanently impacted by this project and will remove any noxious weeds that may invade into those locations.

Wildlife

Direct impacts on wildlife anticipated as a result of the proposed Project include the removal of vegetation and subsequent temporary loss of wildlife habitat along. In addition construction activities would result in the

displacement and/or potential mortality of resident wildlife species that are poor dispersers such as snakes, lizards, and small mammals. Construction may also result in the temporary degradation of the value of adjacent native habitat areas due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. Depending on the timing and location of project activities construction may also result in temporary disruption along terrestrial and riparian wildlife movement corridors crossed by the project.

Impact B-5: Construction activities and increased vehicular traffic on access roads would disturb wildlife species.

Direct loss of small mammals, reptiles, and other less mobile species could also occur during the proposed Project. This action would result primarily from the use of construction vehicles and the grading of laydown areas for tower erection. Fossorial species, such as small burrowing animals (lizards, snakes, and small mammals) may be harmed through the crushing of burrows, the loss of refugia from predators, and direct mortality from construction activities. Construction activities and human presence can also alter or disrupt the breeding and foraging habitat for wildlife species.

Clearing and grading would generate the greatest construction impacts on wildlife, especially in undisturbed portions of the ANF. Removal of vegetation during the construction phase of this project would temporarily diminish the amount of habitat available for wildlife in the area. Individuals displaced from areas cleared of native vegetation could be lost if adjacent habitats are at carrying capacity or if they are exposed to an increased risk of predation. Direct mortality of wildlife is anticipated to occur during habitat clearing, earth removal, grading, digging, and equipment movement. Deaths related to construction would be incurred primarily by burrow-dwelling animals; eggs and nestlings of bird species with small, well-hidden nests (these must be avoided to prevent violation of the Migratory Bird Treaty Act); and species with limited mobility (e.g., lizards, snakes, and ground squirrels). More mobile species like birds and larger mammals are expected to disperse into adjacent habitat areas during the land clearing and grading phases associated with tower construction.

Local populations of wildlife that occur along the proposed Project ROW are expected to temporarily decline or disperse during the construction phase of the project but are expected to return to their pre-construction levels following the restoration of the laydown and tower erection sites. Also, as construction is limited to relatively small areas, wildlife would likely return to the proposed ROW areas as work crews move to new tower locations. Construction could also result in an increase in accidental road-killed wildlife due to increased vehicle traffic along the construction corridor. Diurnal reptiles and mammals that are present in the construction area are the most likely to be subject to mortality from construction vehicles.

Noise, dust, visual disturbance from increased human activity, and exhaust emissions from heavy equipment and helicopters during construction, which would increase as a result of Mitigation Measure V-4a (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), could result in native habitats adjacent to the construction zone being temporarily abandoned by wildlife. 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 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.

A large part of the proposed Project route would be constructed along the existing SCE designated utility corridor. Most of the wildlife expected to be impacted by construction in these disturbed easements are composed of common, wide-ranging species. Due to the narrow area of disturbance along this project and the short duration of disturbance, most of the more common wildlife species found along the transmission line route are expected to quickly recolonize the area after construction activities have been completed. Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, impacts on wildlife from construction would generate potentially adverse but less-than-significant impacts (**Class III**). Construction impacts on listed and candidate wildlife species are discussed separately under Rare, Threatened, or Endangered Wildlife below. Potential impacts to MIS species are also addressed below.

Impact B-6: Construction activities during the breeding season would result in a potential loss of nesting birds.

Ground-disturbing activity, including tower pad preparation and construction and grading of approximately 10 miles (9.7 miles on NFS lands) of new access roads, has the potential to disturb vegetation utilized by nesting birds. The removal of habitat during the breeding season would likely result in the displacement of breeding birds and the abandonment of active nests. Increased noise from helicopter construction, which would increase as a result of Mitigation Measure V-4a (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), could also adversely impact nesting birds. Breeding birds and other wildlife may temporarily or permanently leave their territories to avoid construction activity, which could lead to reduced reproductive success and increased mortality. However, due to the linear nature of the project, regional abundance of habitat, and short duration of helicopter usage, noise would not continue for lengthy time periods at any one location. With the exception of a few species, nesting birds are protected under the Migratory Bird Treaty Act. Nesting birds are also offered protection from the CDFG. Impacts to nesting species would be considered significant without mitigation. The proposed Project has the potential to violate the Migratory Bird Treaty Act as a result of habitat removal during the breeding season. The proposed Project may also result in direct or indirect impacts to raptors that utilize the existing towers for nesting or burrowing owls that utilize the edges of the agricultural fields, existing roads, and irrigation canals for wintering or breeding habitat. These birds may abandon nests if the construction activities occur in close proximity to the nests. Displacement of most birds, including raptors or burrowing owls during the breeding season would be a violation of the Migratory Bird Treaty Act and would potentially result in a significant impact. Implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce Impact B-6 to less-than-significant levels (**Class II**).

Mitigation Measure for Impact B-6

B-6 **Conduct Pre-construction Surveys and Monitoring for Breeding Birds.** SCE shall conduct pre-construction surveys for nesting birds if construction and removal activities are scheduled to occur during the breeding season for raptors and other migratory birds. Surveys shall be conducted in areas within 500 feet of tower sites, laydown/staging areas, substation sites, and access road/spur road locations. SCE shall be responsible for designating a qualified biologist who can conduct pre-construction surveys and monitoring for breeding birds. If breeding birds with active nests are found, a biological monitor shall establish a 350-foot buffer around the nest and no activities will be allowed within the buffer until the young have fledged from the nest or the nest fails. The 300-foot buffer may be adjusted to reflect existing conditions including ambient noise and disturbance with the approval of the CPUC and USFS. The biological monitor shall conduct regular monitoring of the nest to determine success/failure and to ensure that project activities are not conducted within the ~~500-foot~~ buffer until the nesting cycle is complete or the nest fails. The biological monitor shall be responsible

for documenting the results of the surveys and the ongoing monitoring and will provide a copy of the monitoring reports for impact areas on NFS lands to the Forest Biologist.

Impacts on Endangered or Threatened Species, or Proposed or Critical Habitat (Criterion BIO2)

Vegetation

Seven listed or proposed plant species have the potential to occur in the proposed Project area. These include thread-leaved brodiaea, spreading navarretia, slender-horned spineflower, California, Orcutt grass, Braunton's milk-vetch, Nevin's barberry, and San Fernando Valley spineflower. Critical habitat has been designated for one of these plant species, the thread-leaved brodiaea. However, the proposed Project is not located in designated critical habitat for this species.

Ground-disturbing activity, including tower pad preparation and construction, grading of new access roads, tower removal, and use or improvement of existing access roads has the potential to disturb listed plant species. To reduce potential impacts to sensitive plants SCE would implement APM BIO-5 (Pre-construction Surveys). As specified by APM BIO-5, prior to construction biological monitors would flag the boundaries of identified sensitive plant species are located SCE has indicated that populations of sensitive plants would be flagged for construction-phase avoidance. Restricted (flagged) areas would subsequently be monitored during construction to ensure their protection. Additional actions to protect sensitive plant species are addressed below, under Mitigation Measure B-7 (Conduct Surveys for Sensitive Plant Species)

Suitable habitat for spreading navarretia was not detected in the proposed Project ROW and this species is not expected to be impacted by project construction. Slender-horned spineflower has a low potential to occur in alluvial scrub that is associated with San Francisquito Creek, but this area is located greater than 500 feet outside of the ROW. This species is more common in alluvial fan communities located near the Vincent sub-station site. Since suitable habitat for this species does not occur within the proposed ROW and since the project would span San Francisquito Creek, no impacts to this species are expected. California Orcutt grass has a moderate potential to occur based on the presence of a known occurrence within 5 miles of the proposed Project alignment. However, suitable vernal pool habitat was not detected within the ROW during biological reconnaissance surveys. The remaining four threatened or endangered plant species Braunton's milk-vetch, Nevin's barberry, thread-leaved brodiaea, and San Fernando Valley spineflower have a moderate or high potential to occur within the proposed Project ROW and impacts to these species are discussed in Impact B-7, below.

Impact B-7: The proposed Project would result in the loss of listed plant species.

Braunton's milk-vetch, Nevin's barberry, thread-leaved brodiaea, and San Fernando Valley spineflower have potential to occur in the proposed Project ROW. The Project could potentially result in direct impacts related to removal, burial, or destruction of habitat for these species. The majority of these species are annual plants that are best detected during the plants' growing period. With the exception of Nevin's barberry, these species are difficult to identify when not in bloom. Nevin's barberry is a conspicuous evergreen shrub that occurs in chaparral and coastal sage scrub habitat and that can be detected at any time of year because it does not require a flowering structure for positive identification.

To reduce potential impacts to listed plant species, SCE would conduct pre-construction surveys for all listed plants with the potential to occur in the proposed Project ROW (APM BIO-1). SCE would also implement APMs BIO-2, BIO-4, BIO-5, and BIO-6 which require the establishment and flagging of avoidance zones,

conducting biological monitoring during construction, minimization of dust and runoff, and biological training for all Project staff.

Implementation of these measures would reduce the potential for direct impacts to special-status plant species, however several of the plant species that may occur in the proposed Project area have limited flowering periods and are difficult to detect when not in bloom. In addition, periods of drought or reduced rainfall can result in the failure of these plants to bloom or germinate. Pre-construction surveys that are conducted prior to construction activities would likely be insufficient to detect the majority of special-status plant species if conducted at the wrong time of year.

Impacts to listed plant species (Impact B-7) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-7 (Conduct Surveys for Sensitive Plant Species) described below.

Mitigation Measure for Impact B-7

B-7 Conduct Surveys for Listed and Sensitive Plant Species. SCE shall conduct focused surveys prior to construction during the appropriate floristic period appropriate for each sensitive plant species in all suitable habitats located within the Project ROW *and* within 100 feet of all surface disturbing activities.

- Surveys for Braunton's milk-vetch and thread-leaved brodiaea shall be conducted in chaparral, coastal sage scrub, and grassland habitat between March and June.
- Surveys for San Fernando Valley spineflower shall be conducted in coastal sage scrub habitat between April and July.
- Surveys for Kusche's sandwort, Palmer's mariposa lily, alkali mariposa lily, San Gabriel bedstraw, rock monardella, short-joint beavertail, and Rock Creek broomrape shall be conducted in chaparral habitat in June (see Impact B-15).
- Surveys shall be conducted in chaparral and coastal sage scrub habitat between May and June for slender mariposa lily, Plummer's mariposa lily, San Gabriel Mountains dudleya, and between January and April for rayless ragwort (see Impact B-15).
- Surveys for many-stemmed dudleya shall be conducted in chaparral, coastal sage scrub, and grassland habitat between March and July (see Impact B-15).
- Surveys for Hall's monardella shall be conducted in chaparral and grassland habitat between June and August (see Impact B-15).
- Surveys for round-leaved filaree shall be conducted in grassland habitat between March and May (see Impact B-15).

Populations of sensitive plants shall be flagged and mapped prior to construction. If sensitive plants are located during the focused surveys, then modification of the placement of towers, access roads, laydown areas, and other ground disturbing activities would be implemented in order to avoid the plants. If sensitive plants cannot be avoided, SCE shall be responsible for the translocation of plants and/or collection of seeds from existing populations that would be impacted and the planting/seeding of these plants in adjacent suitable portions of the ROW that would not be affected by proposed Project construction or maintenance activities. These transplanted or seeded plants will be monitored for 5 years. In the City of Lancaster, impacts to alkali mariposa lilies may be mitigated through off-site compensation. Impacts to federally or State listed plant species would not be allowed except through the context of a biological opinion.

Wildlife

Eight listed wildlife species were identified with the potential to occur in the proposed Project area. These include arroyo toad, California red-legged frog, mountain yellow-legged frog, Santa Ana sucker, southwestern

willow flycatcher, California condor, coastal California gnatcatcher, and least Bell's vireo. Critical habitat for listed wildlife does not occur in the project area. Southern rubber boa, bald eagle, and Mohave ground squirrel are unlikely to occur within the proposed Project ROW due to the paucity of suitable habitat and geographical restrictions within the species' range. Impacts to these species are not expected to occur.

Amphibians

The mountain yellow-legged frog has a low potential to occur in Bouquet Creek and San Francisquito Creek. San Francisquito Creek would be avoided entirely by the spanning of the transmission line over this area. The primary access road to the Del Sur Ridgeline would not cross Bouquet Creek. A quarry haul road (Forest Road 6N19) that may be used as a secondary access road would cross Bouquet Creek at an existing improved crossing. This elevated bridge was upgraded in 2005 and would allow construction vehicles to avoid impacts to riparian areas. No wet crossings of Bouquet Creek would occur. As the proposed Project would not impact Bouquet Creek or San Francisquito Creek, no impacts to mountain yellow-legged frog are expected to occur. Potential indirect impacts to amphibians or aquatic resources that may occur in the creek from increased erosion potential ~~would~~ are not expected to result in adverse impacts. APM BIO-1 and Mitigation Measure B-16, discussed further below, would require the flagging and avoidance of bodies of water that could potentially support breeding pools for special-status amphibian species, in addition to which APM BIO-5 would require monitoring by a biologist to ensure that these restricted (flagged) areas are protected during construction-phase activities. Implementation of Mitigation Measure B-16 would also provide for the relocation of identified sensitive amphibian species that may be found within construction zones. SCE has indicated that pre-construction surveys (APM BIO 1), flagging and avoidance of bodies of water that could potentially support breeding pools for special-status amphibian species (APM BIO 5), and implementation of BMPs to control sedimentation and erosion near these bodies of water and all drainages (APM BIO 4) would avoid direct impacts to these species. In addition, potential erosion from grading on the ridge line or access roads would be further minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Impact B-8: Construction activities would result in loss of arroyo toads.

The arroyo toad has been documented in San Francisquito Creek near the confluence with the Santa Clara River approximately 1.5 miles south of the proposed ROW (entirely on non-NFS lands). In addition suitable habitat for this species including shallow slow moving pools, gravel bars, and adjacent upland habitat is present within San Francisquito Creek directly under the proposed transmission line. Because this species is highly mobile and suitable habitat is located within the proposed Project ROW there is a potential for this species to be present in the project area. Likewise, this species has been known to utilize upland habitat within 2,000 meters (6,562 feet) of breeding habitat for foraging and wintering. Focused surveys for this species conducted by Aspen in the spring of 2006 did not detect the presence of this species in the proposed Project area. However, the habitat in San Francisquito Creek can be considered excellent for this species. In addition, large populations of western toad, Pacific chorus frog, and California tree frog were noted in the area. Based on this survey it is possible that the Project area could support small populations of this species which were not detected during the surveys of the Project area due to local road noise.

Although the area within San Francisquito Creek supports habitat for this species the adjacent uplands are currently subject to ongoing development and much of the area has been cleared and graded for future home development on both sides of the creek. Currently, silt fence, exclusion netting, and chain link fencing is located along the entire western border of the creek. Due to the highly disturbed and developed nature of the

area, upland habitat for the arroyo toad within the proposed ROW outside the creek is limited to patches of undeveloped habitat that occurs adjacent to the creek along McBean Parkway.

APM BIO-3 stipulates that construction crews would avoid impacting the streambeds and banks of any streams along the proposed Project ROW to the extent feasible. Avoidance of these areas would reduce the potential to impact SCE has indicated that breeding habitat for the arroyo toad breeding habitat, including habitat located within that portion of the ROW that spans would be avoided by the proposed Project as the transmission lines would span San Francisquito Creek (APM BIO-3). However, construction activities, including the establishment of pulling locations and the construction of towers on the east side of the creek, could result in potential impacts to arroyo toad habitat. Impacts to breeding habitat or toads could occur if work crews hand carry lines or equipment across the creek.

Direct impacts to arroyo toad, if present, could occur from the proposed Project as a result of crushing from mechanized equipment, temporary disruption of foraging or thermoregulation sites in adjacent upland areas or the disruption of egg masses from impacts to water quality. Breeding behavior could also be disrupted due to construction noise, and the timing of construction activities. Disturbance to the area would be associated with the temporary removal of vegetation, for the construction of tower footings or pulling sites. Construction activity may result in the incidental take of individual toads, egg masses, and larvae depending on the construction season. Because this species is largely nocturnal, impacts from vehicle use at dawn, dusk, and during the evening would be of concern because this species may traverse roads between riparian and upland habitats, especially during rain events. However, large numbers of toads, both adults and juveniles, may be active at night during the spring and early summer under otherwise dry conditions. During these activities, toads may move onto and across roads, where they are subject to road kill by passing vehicles. ~~However, SCE has indicated that construction activities would be limited to daylight hours.~~

Direct effects to juvenile toads may also occur. In many cases, recruitment of metamorphic arroyo toads may occur in only a small section of the stream, even if breeding activity has been more widely distributed. Observations on the Los Padres National Forest (Sweet, 1992) and on other sites in Orange and San Diego Counties indicate that even brief human activities are likely to result in substantial mortality of metamorphic toads. This is usually not a deliberate act; the cryptic nature, very small size (<20 mm or 0.8 in) and immobility (when on the surface) of metamorphic toads foster accidental trampling.

Indirect effects to this species if present may be caused by the diversion or modification of water flows, or increased downstream sediment transport. Other indirect effects could result from fuel, lubricant, or concrete spills that flow into water supporting these species. Human activities can indirectly affect arroyo toads by increased noise or by attracting predators such as the common raven, kit fox, and coyote from trash and litter (Boarman, 2002). Increased noise levels can interfere with breeding and mask the approach of predators. It is possible that the proposed project may have short term indirect effects on arroyo toad during the construction of the new transmission line. However, SCE does not intend to divert or modify the flow of San Francisquito Creek, or operate equipment within the channel.

Indirect impacts to arroyo toad could occur from clearing and grading for new tower locations. The removal of vegetation from these areas could result in erosion and downstream transport of sediment into habitat that occurs downhill from these areas. However, permanent loss of arroyo toad upland habitat is not expected to occur from implementation of the proposed Project. At this location the existing towers would be replaced and pulling locations would consist of temporary work sites. This area also appears to be subject to ongoing urban development and much of the habitat in this area appears to be graded. Because of the cryptic nature of this species, arroyo toads in this area, if present, could be subject to incidental take. Actions that result in the take of

federally listed species would be authorized under the context of a Biological Opinion. Through the implementation of project Mitigation Measures, project activities may affect, but are not likely to adversely affect populations of arroyo toad if present. No critical habitat for this species would be affected by the proposed project.

Impacts to arroyo toads and to breeding and upland habitat for this listed amphibian species (Impact B-8) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measures B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages), described below.

Mitigation Measures for Impact B-8

B-8a Conduct Focused Surveys for Arroyo Toad. SCE shall contract with a qualified local biologist to conduct focused surveys for arroyo toad in San Fransquito Creek. If detected in or adjacent to the proposed ROW no work will be authorized within 500 feet of occupied habitat until SCE provides concurrence from the USFWS to the CPUC. If present SCE shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG.

- SCE shall retain a qualified biologist with demonstrated expertise with arroyo toads to monitor all construction activities in arroyo toad potential habitat and assist SCE in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad.
- Prior to the onset of construction activities, SCE shall provide all personnel who will be present on work areas within or adjacent to the project area the following information:
 - a. A detailed description of the arroyo toad including color photographs;
 - b. The protection the arroyo toad receives under the Endangered Species Act and possible legal action or that may be incurred for violation of the Act;
 - c. The protective measures being implemented to conserve the arroyo toad and other species during construction activities associated with the proposed project; and
 - d. A point of contact if arroyo toads are observed.
- All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each work day.
- Prior to the onset of any construction activities, SCE shall meet on-site with staff from the USFWS and the authorized biologist. SCE shall provide information on the general location of construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, SCE, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. The goal of this effort is to reduce the level of mortality of arroyo toads during construction. The parties realize that complete elimination of all mortality is likely not possible because some arroyo toads may occur anywhere within suitable habitat during any given season; the detection of every individual over large areas is impossible because of the small size, fossorial habits, and cryptic coloration of the arroyo toad.
- Where construction can occur in habitat where arroyo toads are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG/CPUC. All workers will be advised that equipment and vehicles must remain within the fenced work areas.

- The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any arroyo toads from within the fenced area to suitable habitat outside of the fence. If arroyo toads are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with e USFWS/CDFG/CPUC.
- Fencing to exclude arroyo toads will be at least 24 inches in height.
- The type of fencing must be approved by the authorized biologist and the USFWS/CDFG/CPUC.
- Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of arroyo toads may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist SCE in scheduling its work activities accordingly.
- If arroyo toads are found within an area that has been fenced to exclude arroyo toads, activities will cease until the authorized biologist moves the arroyo toads.
- If arroyo toads are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the arroyo toads. The authorized biologist in consultation with USFWS/CDFG/CPUC will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS.
- Any arroyo toads found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.
- The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.
- Staging areas for all construction activities will be located on previously disturbed upland areas designated for this purpose. All staging areas will be fenced within potential toad habitat.
- To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.
- Drift fence/pitfall trap surveys will be implemented in toad sensitive areas prior to construction in an effort to reduce potential mortality to this species. Prior to any construction activities in the project area, silt fence shall be installed completely around the proposed work area and a qualified biologist should conduct a preconstruction/ clearance survey of the work area for arroyo toads. Any toads found in the work area should be relocated to suitable habitat. The silt fence shall be maintained for the duration of the work activity.
- SCE shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when arroyo toads may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.

B-8b Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages. SCE shall conduct road maintenance activities and new construction activities that occur within drainages ~~during the dry season~~ when no water flow is present. Seasonal restrictions will reduce the potential for increased sedimentation of potential arroyo toad breeding pools or other listed riparian dependent species that could occur downstream of the ROW. Vehicles and equipment shall not utilize the Bouquet Creek crossing (Forest Road 6N19) if flowing water covers any portion of the bridge.

Impact B-9: Construction activities would result in the loss of California red-legged frogs.

The California red-legged frog is known to occur in San Francisquito Creek and Amargosa Creek in the Leona Valley and has the potential to occur in artificial stockponds that are present in the proposed Project area between Miles 3.0 and 5.0. This area occurs outside of NFS lands and involves approximately five acres of the project area. This species may also be present in the headwaters of drainages that occur throughout the region. Amargosa Creek and several stockponds are located in the proposed ROW in the Leona Valley south of Lake Elizabeth Road. The creek channel in this area is currently utilized by cattle for grazing and the area adjacent to the creek and around the existing pole locations is currently farmed for cereal crops.

The proposed Project occurs approximately 4 miles south of the LOS-1 Unit (San Francisquito Creek) and approximately 16 miles east of the VEN-3 Unit (Piru Creek) of the revised proposed critical habitat for this species (USFWS 2005b), therefore no impacts to critical habitat for this species ~~would occur~~ are expected. Although this species was not identified during reconnaissance surveys of the area, populations of California red-legged frogs have been documented in both up- and downstream sections of Amargosa Creek. Therefore there is a high potential for this species to occur in or adjacent to the proposed Project ROW. This is a highly aquatic species and construction activities would not occur in the drainage and it is likely that impacts to this species, if present, could be avoided through the implementation of mitigation measures. However, depending on the time of year (spring and summer) this species may move to upland areas to feed or aestivate. Construction that disturbs these areas would potentially affect these species. Implementation of pre-construction surveys (APM BIO-1), flagging (APM BIO-2) and avoidance of bodies of water that could potentially support California red-legged frogs (APM BIO-5), and implementation of BMPs to control sedimentation and erosion (APM BIO-4) would avoid direct impacts to this species. Although construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (APM BIO-3), replacement of culverts and placement of new access and spur roads could potentially result in an impact to California red-legged frog that could occur upstream or downstream from the site. Impacts to California red-legged frog habitat are similar to the arroyo toad and (Impact B-7) and would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages) and B-9 (Conduct Focused Surveys for California Red-legged Frog) described below. Through the implementation of project Mitigation Measures, project activities may affect, but are not likely to adversely affect populations of red-legged frog. No critical habitat for this species would be affected by the proposed Project.

Mitigation Measures for Impact B-9

B-9 Conduct Focused Surveys for California Red-legged Frog. SCE shall contract with a qualified local biologist to conduct focused surveys for California Red-legged frog in all areas that may support this species. If detected in or adjacent to the proposed ROW no work will be authorized within 500 feet of occupied habitat until SCE provides concurrence from the USFWS to the CPUC. If present SCE shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and CDFG.

- SCE shall retain a qualified biologist with demonstrated expertise with red-legged frogs to monitor all construction activities and assist SCE in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of red-legged frog.

- Prior to the onset of construction activities, SCE shall provide all personnel who will be present on work areas within or adjacent to the project area the following information:
 - a. A detailed description of the red-legged frog including color photographs;
 - b. The protection the red-legged frog receives under the Endangered Species Act and possible legal action or that may be incurred for violation of the Act;
 - c. The protective measures being implemented to conserve the red-legged frogs and other species during construction activities associated with the proposed project; and
 - d. A point of contact if red-legged frogs are observed.
- All trash that may attract predators of the red-legged frogs will be removed from work sites or completely secured at the end of each work day.
- Prior to the onset of any construction activities, SCE shall meet on-site with staff from the USFWS and the authorized biologist. SCE shall provide information on the general location of construction activities within habitat of the red-legged frogs and the actions taken to reduce impacts to this species. Because red-legged frogs may occur in various locations during different seasons of the year, SCE, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on red-legged frogs. For example construction during the time of year when red-legged frogs are dormant October through January (although frogs may remain active year round) would reduce impacts to this species. The goal of this effort is to reduce the level of mortality of red-legged frogs during construction.
- Where construction can occur in habitat where red-legged frogs are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS/CDFG/CPUC. All workers will be advised that equipment and vehicles must remain within the fenced work areas.
- The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any red-legged frogs from within the fenced area to suitable habitat outside of the fence. If red-legged frogs are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with e USFWS/CDFG/CPUC.
- Fencing to exclude red-legged frogs will be at least 24 inches in height.
- The type of fencing must be approved by the authorized biologist and the USFWS/CDFG/CPUC.
- Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of red-legged frogs may congregate will be conducted during times of the year (winter) when individuals have dispersed from these areas or the species is dormant. The authorized biologist will assist SCE in scheduling its work activities accordingly.
- If red-legged frogs are found within an area that has been fenced to exclude red-legged frogs, activities will cease until the authorized biologist moves the red-legged frogs.
- If red-legged frogs are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the red-legged frogs. The authorized biologist in consultation with USFWS/CDFG/CPUC will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist.
- Any red-legged frogs found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.
- The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.
- Staging areas for all construction activities will be located on previously disturbed upland areas designated for this purpose. All staging areas will be fenced.

- To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.
- SCE shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when red-legged frogs may be present on the access road. Traffic speed should be maintained at 20 mph or less in the work area.

Fish

Santa Ana sucker and unarmored threespine stickleback have the potential or are known to occur in San Francisquito Creek and Bouquet Creek. However, construction activities are not expected to impact these waterways. At San Francisquito Creek the transmission line would span the area and impacts to habitat that could support sensitive fish are not expected to occur. In addition, the primary access road to the Del Sur Ridgeline (Forest Road 5N24) would not cross wetted portions of Bouquet Creek. A quarry haul road that may be used as a secondary access road (Forest Road 6N19) would cross Bouquet Creek at an existing raised crossing. As the proposed Project is/would not anticipated to impact/encroach upon Bouquet Creek, impacts to Santa Ana sucker or unarmored threespine stickleback are not expected to occur. However, road improvements associated with the existing crossing of Bouquet Creek may trigger the need to improve an existing culvert to prevent its failure. Per the requirements of Mitigation Measure B-1b, activities associated with the culvert's improvements would be required to avoid impacts to Bouquet Creek. With implementation of this mitigation measure, and the stipulations of Mitigation Measure B-8b, potential impacts to the unarmored threespine stickleback and Santa Ana sucker would be reduced to a less-than-significant level (Class II). However, should culvert improvement activities be unable to avoid Bouquet Creek, potentially significant impacts to these species could occur. Consequently, prior to any work within Bouquet Creek, SCE would be required to obtain authorization from the USFS. To comply with the ESA, prior to issuance of an authorization, the USFS would consult with the USFWS and develop appropriate mitigation measures for culvert improvement activities within the context of a Biological Opinion.

Birds

Impact B-10: The Project would result in loss of foraging habitat for listed raptor species.

Three listed raptor species (Swainson's hawk, peregrine falcon, and California condor) have the potential to forage on or near the majority of the proposed Project area. This includes approximately 315 acres of NFS lands. Increased noise from helicopter construction, which would increase as a result of Mitigation Measure V-4a (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), could also adversely impact these species and result in the temporary abandonment of foraging territories to avoid ongoing construction activity. However, because of the mobility of raptors and wide foraging areas in the region, construction activities are not expected to adversely impact these species. Condors that occur in the region forage on carrion and occur primarily at feeding stations located within NFS lands outside the project area. Impacts to foraging habitat for listed raptor species would be the same impacts that are described for Impact B-3. However on a regional level, the proposed Project would result in only limited disturbance to foraging habitat utilized by these species. Similarly, transmission line towers provide vantage points for perching raptors, such as the Swainson's hawk and peregrine falcon, and these species may utilize the towers for perches when foraging. Temporary and permanent loss of native vegetation communities that provide foraging habitat for listed raptor species (Impact B-~~108~~) would be reduced to a less-than-significant level (Class II) through

implementation of Mitigation Measures B-1a (Provide Restoration/ Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impact B-11: The Project would result in loss of listed riparian bird species.

Three listed song birds have the potential to nest in riparian habitat located within or adjacent to the proposed Project ROW. Most of this area, approximately nine of the 10 acres, is located on NFS lands. These migratory species are summer residents in California and have some potential to occur in the proposed Project area and may include the western yellow-billed cuckoo, southwestern willow flycatcher, and least Bell's vireo. These species are associated with riparian areas that occur adjacent to access roads at Bouquet Reservoir, San Francisquito Creek, and in Haskell Canyon. Riparian vegetation is also located at the quarry haul road crossing at Bouquet Canyon Creek. ~~SCE has indicated that impacts to riparian habitat would be avoided.~~ The proposed Project would span drainages, avoid impacts in Riparian Conservation Areas, and minimize potential disturbances to other sensitive areas, such as, ~~to riparian vegetation, and restricting travel would be restricted to existing roads. in these sensitive areas.~~ In addition, where existing road traffic occurs, such as the quarry road and along existing roadways, impacts to these three riparian bird species are not expected as this area is located adjacent to Bouquet Road, a heavily traveled corridor. However, construction activities including noise, vehicle traffic, and human presence could result in impacts to nesting birds if project related activities are conducted during the breeding season in more isolated areas including Haskell Canyon.

To reduce impacts to nesting birds SCE would implement APM BIO-1 which is to conduct pre-construction surveys for sensitive wildlife that may occur in the proposed Project area. SCE would also require the presence of a biological monitor during construction (APM BIO-5) and implementation of BMPs to minimize dust and runoff (APM BIO-4) to riparian areas. In addition, impacts to listed riparian bird species (Impact B-11) would be reduced to a less-than-significant level (Class II) with the implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds). On NFS lands no construction would be authorized within RCA's, Mitigation Measure B-1b, to comply with the Forest Plan. This mitigation measure is required in addition to APMs BIO-1, BIO-4, and BIO-5 to ensure that listed riparian bird species are not significantly impacted by the proposed Project.

Impact B-12: The Project would result in the loss of coastal California gnatcatchers.

Coastal California gnatcatchers have a limited potential to occur in coastal sage scrub habitat that occurs between Miles 21.0 and 25.6. This area is located outside of NFS lands in the Santa Clarita Valley. Although the area is subject to urbanization and ongoing construction activities are currently underway in the area, small patches of good quality coastal sage scrub occurs along this section of the ROW. Gnatcatchers if present in or adjacent to the ROW could be directly impacted by construction activities through removal of nests and habitat. Construction noise, dust, and the presence of project personnel can result in the disruption of breeding or nursery behavior such as incubating or attending the nest similar to impacts discussed for Impact B-11. ~~Implementation of APM BIO-1 would SCE has indicated that require pre-construction surveys would be conducted for all sensitive species with the potential to occur within the proposed Project ROW (APM BIO-1).~~ However, because of the potential for this species to be present in the proposed Project ROW, focused surveys for coastal California gnatcatchers would be required in addition to APM BIO-1. Pre-construction surveys for species that are not conducted in accordance with protocol guidelines are unable to definitively determine the presence/absence of this species. If gnatcatchers are determined to be present within or adjacent to the proposed Project ROW, then any impacts to coastal sage scrub would be considered significant. To reduce impacts to coastal sage scrub habitat, SCE would require the presence of a biological monitor during construction (APM BIO-5) and implementation of BMPs to minimize dust and runoff (APM BIO-4) to coastal sage scrub habitat.

Impacts to coastal California gnatcatchers (Impact B-12) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-12 (Conduct Protocol Surveys for California Gnatcatchers). This mitigation measure is required in addition to APMs BIO-1, BIO-4, and BIO-5 to ensure that coastal California gnatcatchers and their habitat are not significantly affected by the proposed Project.

Mitigation Measures for Impact B-12

B-12 Conduct Protocol Surveys for California Gnatcatchers. SCE shall conduct protocol level surveys for California Gnatcatchers in all areas supporting suitable coastal sage scrub habitat that may be affected by the project. This will include a minimum 300-foot buffer. Presence/absence of this species shall be determined prior to construction activities. If present, SCE shall avoid construction in or adjacent to occupied habitat during the breeding season (March 15-July 31). If direct impacts to coastal California gnatcatcher occupied habitat cannot be avoided, project activities shall not occur in occupied habitat until impacts to this species have been addressed through either the Section 7 or Section 10(a)(1)(B) Process under the Federal Endangered Species Act of 1973, as amended. SCE shall complete compliance with the Federal Endangered Species Act prior to Project construction. Mitigation measures developed through this process shall include restriction of construction activities within coastal sage scrub habitat during the gnatcatcher breeding season (March 15-July 31), restoration/creation/enhancement of on-site coastal sage scrub habitat, and/or the purchasing of land or mitigation bank credits at an appropriate ratio to offset impacts to gnatcatchers and their habitat.

Impact B-13: The Project would result in the electrocution of listed bird species.

Swainson's hawks, California condors, and other large aerial perching birds are most susceptible to electrocution because of their size, distribution, and behavior (Olendorff et al., 1981; APLIC, 1996). Because raptors and other large aerial perching birds often perch on tall structures that offer optimal views of potential prey, the design characteristics of transmission towers/poles appear to be a major factor in raptor electrocutions (APLIC 1996). Electrocution occurs only when a bird simultaneously contacts two energized phase conductors or an energized conductor and grounded hardware. This happens most frequently when a bird attempts to perch on a transmission tower/pole with insufficient clearance between these elements. Raptor species that utilize the towers for nesting could be electrocuted while landing. Nests may be built in areas that are susceptible to electrical charges which may result in fire as well as an electrical outage. However, 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). In addition, the proposed Project would be constructed with minimum clearances between phase conductors or between phase conductors and grounded hardware, as recommended by APLIC (1996), that are sufficient to protect even the largest birds including condors, and therefore would present little to no risk of bird electrocution. Therefore, impacts would be considered potentially adverse but less than significant (**Class III**). To comply with the ANF Forest Plan standards, the following additional Mitigation Measure B-13 (Raptor safety protection will be required on tower/conductor (lines) of NFS lands) would be implemented.

B-13 Raptor safety protection will be required on tower/conductor (lines) of NFS lands. Install high-visibility or avoidance devices and appropriate raptor guards on poles and other structures potentially used as perching sites by California Condors. Guidance on raptor protection can be found in Suggested Practices for Raptor Protection on Power Lines (Electric Institute/Raptor Research Foundation) and 2005 Avian Protection Plan Guidelines (Electric Institute/USFWS).

Impact B-14: The Project would result in transmission line collisions by listed bird species.

Bird collisions with power lines generally occur when: (1) a power line or other aerial structure transects a daily flight path used by a concentration of birds, and (2) migrants are traveling at reduced altitudes and encounter tall structures in their path (Brown, 1993). 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 (i.e., mallard ducks) are known to collide with wires (APLIC, 1994), particularly during nocturnal migrations or poor weather conditions (Avery et al., 1978). However, passerines and waterfowl have a lower potential for collisions than larger birds, such as raptors. Some behavioral factors contribute to a lower collision mortality rate for these birds. Passerines and waterfowl tend to fly under power lines, as opposed to larger species, which generally fly over the lines and risk colliding with the higher static lines, and many smaller birds tend to reduce their flight activity during poor weather conditions (Avery et al., 1978). California condors have longer wingspans and less maneuverability than most raptor species and appear to be the most susceptible to line collisions. Beginning in 1992, the USFWS began reintroducing captive-bred condors to the wild. Since that time, at least seven condors that have been released in California have resulted in mortalities due to collisions with power lines (USFWS, 2001c). Although an aversion training program is implemented for California condors prior to release from captivity and although several transmission lines already exist within the proposed Project ROW, the potential for condor collisions is still a threat. California condors are known to utilize expansive areas during flight and although this species is not known to frequent the proposed Project area, it is likely that condor's periodically overfly the ridge lines of the proposed Project (Sue, 2005). It is possible that a condor could strike the proposed transmission line at some point in the future. However, evaluating this possibility is speculative and it is not possible to fully determine if this would occur in this location.

It is difficult to predict the magnitude of collision-caused bird mortality without extensive information on bird species and movements in the project vicinity. These data are not available for the proposed transmission line study area. However, it is generally expected that collision mortality would be greatest where the movements of susceptible species are the greatest (e.g., near wetlands, open water bodies, ridge lines etc.), such as Bouquet Reservoir, Leona Valley, and San Francisquito Canyon. Currently these areas support the existing 66-kV transmission lines. It is possible that birds would strike the new transmission lines however; it is not expected to result in a substantial increase from baseline conditions. Through the implementation of project Mitigation Measures identified below, project activities may affect, but are not likely to adversely affect the California condor.

Bird collisions (Impact B-14) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-14 (Utilize Collision-reducing Techniques).

Mitigation Measures for Impact B-14

B-14 Utilize Collision-reducing Techniques. Collision-reducing techniques, as outlined in "Mitigating Bird Collisions with Power Lines: The State of the Art in 1994," shall be implemented with the Project.

- Placement of towers and lines shall not be located significantly above existing transmission line towers and lines, topographic features, or tree lines to the maximum extent practicable.

- Overhead lines (i.e., conductors and ground wires) that occur significantly above the above-mentioned features and that are located in highly utilized avian flight paths (i.e. Bouquet Canyon Reservoir, Leona Valley, San Francisquito Canyon), will be marked utilizing aerial marker spheres, swinging plates, spiral vibration dampers, bird flight diverters, avifauna spirals, or other diversion device approved by the Forest Biologist (on NFS lands) as to be visible to birds and reduce avian collisions with lines.
- Where overhead transmission lines occur in California Condor habitat work with utility companies or authorization holders to install high-visibility or avoidance devices and raptor guards on poles and other structures potentially used as perching sites by California Condors.

Impacts on Candidate, Sensitive, or Special-status Species (Criterion BIO3)

Vegetation

Chaparral and coastal sage scrub habitats in the proposed Project area support a wide diversity of sensitive plant species. Of the twenty-nine sensitive or special-status plant species that were addressed in the literature review, thirteen of these species are not expected to occur because the proposed Project ROW does not contain suitable soil type/habitat or is located outside the known elevation range of the species. These species are identified below and are not analyzed further in this document. Species not expected to occur in the proposed Project area include:

- Crested milk-vetch
- San Antonio milkvetch
- Scalloped moonwort
- Mingan moonwort
- Pygmy poppy
- Mt. Gleason Indian paintbrush
- Peirson's spring beauty
- Southern alpine buckwheat
- Johnston's buckwheat
- Lemon lily
- San Gabriel linanthus
- Baja navarretia
- Pine green-gentian
- White-bracted spineflower
- Los Angeles sunflower

Impact B-15: The Project would result in the loss of special-status plant species.

Sensitive plant species with the potential to occur in the proposed Project ROW include:

- Kusche's sandwort
- Slender mariposa lily
- Palmer's mariposa lily
- Plummer's mariposa lily
- Alkali mariposa lily
- San Gabriel Mountains dudleya
- San Gabriel bedstraw
- Rayless ragwort
- Many-stemmed dudleya
- Short-joint beavertail cactus
- Hall's monardella
- Rock Creek broomrape
- Round-leaved filaree
- Rock monardella

Construction related impacts to sensitive plant species would be same as described for Impact B-7 for listed plant species and would be considered significant without mitigation. Ground-disturbing activity, including tower pad preparation and construction, grading of new access roads, tower removal, and use or improvement of existing access roads has the potential to disturb listed plant species.

To reduce potential impacts to special status plant species, SCE would conduct pre-construction surveys for all listed plants with potential to occur in the proposed Project ROW (APM BIO-1). SCE would also implement APMs BIO-2, BIO-4, BIO-5, and BIO-6 which require the establishment and flagging of avoidance zones, conducting biological monitoring during construction, minimization dust and runoff, and biological training for all Project staff.

To reduce potential impacts to sensitive plant species that may occur in the project area (**Class II**), implementation of Mitigation Measure B-7 (Conduct Surveys for Special Status Plants) would be required in addition the APMs proposed by SCE.

Wildlife

More than 36 sensitive or special-status wildlife species were addressed in the literature review for the proposed Project area. One special-status wildlife species, the San Gabriel Mountains slender salamander, was determined to be unlikely to occur in the project area because the proposed Project is located outside the known geographic range for this species; therefore no impact to this species is expected.

Amphibians

The foothill yellow-legged frog has a low potential to occur in Bouquet Creek. The primary access road to the Del Sur Ridgeline beginning at Bouquet Canyon Reservoir and ending at Haskell Canyon would not cross Bouquet Creek. A quarry haul road that may be used as a secondary access road would cross Bouquet Creek at an existing improved crossing. As the proposed Project would not impact Bouquet Creek, no impacts to foothill yellow-legged frog are expected to occur. Potential indirect impacts to amphibians or aquatic resources that may occur in the creek from increased erosion potential are not expected to result in adverse impacts. APM BIO-1 and Mitigation Measure B-16, below, would require the flagging and avoidance of bodies of water that could potentially support breeding pools for special-status amphibian species, in addition to which APM BIO-5 would require monitoring by a biologist to ensure that these restricted (flagged) areas are protected during construction-phase activities. Implementation of Mitigation Measure B-16 would also provide for the relocation of identified sensitive amphibian species that may be found within construction zones. The SCE has indicated that pre-construction surveys (APM BIO-1), flagging and avoidance of bodies of water that could potentially support breeding pools for special-status amphibian species (APM BIO-5), and application of implementation of BMPs to control sedimentation and erosion near these bodies of water and all drainages, as required by APM BIO-4, would also avoid direct impacts to these species. Additionally, potential erosion from grading on the ridge line or access roads would be further minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Impact B-16: The Project would result in the loss of special-status amphibian species.

Two sensitive species of amphibians, yellow-blotched salamander and the western spadefoot toad have the potential to occur in the proposed Project area. The yellow-blotched salamander has a low potential to occur in the oak tree leaf litter and woody debris associated with oak woodlands that occur within the ROW in the Santa Clarita Valley (non-NFS lands). The western spadefoot toad has a high potential to occur in grassland habitat located through out the project area including Haskell Canyon, San Francisquito Canyon, and the lowland hills between located Miles 0.0 and 5.0, and lowland hills between Miles 21.3 and 25.2.

Implementation of the proposed Project would have the potential to adversely impact western spadefoot toad as a result of vegetation removal for staging areas and vehicle traffic. Western Spadefoot toad is a highly cryptic species that breed in the ephemeral pools that form during winter storms that occur in this region. Because this species is rarely seen it is difficult to determine the presence of this species until after rain events. Potential breeding pools for this species occur in road ruts along the existing unpaved access roads, grass swales, and low-lying areas within grasslands. Expansion of the Antelope Substation would result in a permanent loss of 33 acres of potential upland habitat for western spadefoot toad. Non-native grassland habitat would also be temporarily removed during construction of towers, line installation, and expansion of the Antelope Substation.

Habitat removal from construction of the towers and laydown areas may result in the direct mortality of this species through mechanical crushing or habitat degradation. This potential impact would be considered significant without mitigation. To reduce potential impacts to this species SCE would implement pre-construction surveys of the project area and conduct routine inspections of the ROW by qualified environmental monitors.

~~SCE has indicated that pre-construction surveys (APM BIO-1 and Mitigation Measure B-16, below, would require the~~ flagging and avoidance of bodies of water that could potentially support breeding pools for special-status amphibian species, in addition to which APM BIO-5 would require monitoring by a biologist to ensure that these restricted (flagged) areas are protected during construction-phase activities. Implementation of Mitigation Measure B-16, below, would also provide for the relocation of identified sensitive amphibian species that may be harmed by construction-related activities. Application of ~~and implementation of~~ BMPs to control sedimentation and erosion near these bodies of water and all drainages (APM BIO-4) would also minimize/avoid direct impacts to these species. Temporary and permanent loss of native vegetation communities that provide habitat for special-status amphibian species (Impact B-16~~4~~) would be reduced to less-than-significant (**Class II**) through implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-16 (Conduct Pre-construction Surveys for sensitive Amphibians and Reptiles).

Mitigation Measure for Impact B-16

B-16 Conduct Pre-construction Surveys for Sensitive Amphibians and Reptiles. SCE shall contract with a qualified ~~local~~ biologist to conduct pre-construction surveys for sensitive amphibians and reptiles. ~~Surveys for special status salamanders shall be conducted between March and May. Salamander surveys should include searching beneath all cover objects (logs, limbs, rocks) in the ROW and relocating individuals to suitable microhabitat outside of the project area. Surveys for spadefoot larvae and toads should be conducted in pooled aquatic habitats, including stock tanks and stock ponds, anywhere within 500 feet of either side of the ROW between December and April. Habitat occupied by toads shall be flagged and avoided during construction. Adult toads shall be moved to suitable habitat if construction activities will impact the pool or depression. Sensitive reptiles shall be moved a minimum of 500 feet off the ROW to suitable habitat.~~

Fish

The arroyo chub is known to occur in San Francisquito Creek and lower portions of Bouquet Creek, both tributaries to the Santa Clara River. The Santa Ana speckled dace has a low potential to occur within Bouquet Creek. However, construction activities are not expected to impact these waterways. At San Francisquito Creek the transmission line would span the area and impacts to habitat that could support sensitive fish are not expected to occur. In addition, the primary access road to the Del Sur Ridgeline would not cross Bouquet Creek. A quarry haul road that may be used as a secondary access road would cross Bouquet Creek at an existing improved crossing. As the proposed Project would not impact Bouquet Creek, impacts to arroyo chub and Santa Ana speckled dace if present are not expected to occur. Implementation of Mitigation Measure B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages) and B-1b (No Activities will occur in Riparian Conservation Areas) would further reduce potential impacts to these species.

Reptiles

Impact B-17: The Project would result in the loss of special-status reptile species.

Construction of this segment of the proposed Project would remove habitat for San Diego and California coastal horned lizards. These species have been observed during surveys in the ANF and may be subject to mortality from project related activities. Although not observed during surveys, the proposed Project could also result in impacts to silvery legless lizard, coastal rosy boa, San Bernardino ringneck snakes, and San Bernardino Mountain king snake.

The silvery legless lizard has a moderate to high potential to occur in sandy or loose loamy soils under sparse vegetation in drainages that occur throughout the alignment. Coastal rosy boa is known to occur in suitable habitat on the ANF and inhabits coastal sage scrub and chaparral-dominated communities that contain large rocks and boulders for cover and refuge. Coastal rosy boas are often found near permanent or intermittent streams and the project cross habitat where this species may occur.

San Bernardino ringneck snakes are found in a wide variety of habitats and these species are not strongly associated with riparian habitats. However, the apparent importance of tree frogs and slender salamanders in their diet suggests they may seek out and require moist microclimates. This habitat association is also suggested by their reported absence from desert-side habitats. Ringneck snakes are rarely seen on the surface, but are usually found under rocks, logs, or leaf litter. This species may be subject to project disturbance in rocky areas associated with riparian habitats. The San Bernardino Mountain king snake typically occurs in sunlit canyons with rocky outcrops.

Permanent and temporary loss of habitat or mortality to individual species could occur at laydown/staging areas, along temporary access/spur roads, and in other areas that are temporarily disturbed during construction, such as tower locations. Direct losses to these species could occur if present, as a result of the proposed Project, however, these impacts would likely be less than significant with the implementation of APMs including pre-construction surveys (APM BIO-1) and subsequent protection of any special-status reptile species found during pre-construction surveys (APM BIO-5). Areas temporarily disturbed by Project construction would be restored at the completion of construction. In addition to the APMs listed above, Mitigation Measures B-16 (Conduct Pre-construction Surveys for Sensitive Amphibians and Reptiles) and B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) would be implemented to reduce Impact B-17 to a less-than-significant level (**Class II**).

Impact B-18: The Project would result in the loss of aquatic special-status reptile species.

The southwestern pond turtle and two-striped garter snake have the potential to occur in permanent or nearly permanent water bodies located in the proposed ROW. This includes stockponds and creeks that occur in agricultural and grazing land between Miles 3.0 and 5.0, tributaries to Bouquet Reservoir, and Bouquet Creek. These species are also likely to occur in upstream portions of San Francisquito Canyon that are located outside of the proposed ROW. These species are often found in or adjacent to creeks and streams, and ponds and could be impacted by vegetation clearing and road maintenance. Direct effects to southwestern pond turtle may occur from construction activity as a result of mechanical crushing, loss of nesting, breeding or basking sites, and human trampling. Disturbance would be associated with the removal of vegetation, excavation of footings, and tower construction adjacent to areas that support this species. Disruption of basking activity and potential impacts to southwestern pond turtles may result from construction activities, if pond turtles are moving from the creek to basking sites.

Impacts to southwestern pond turtles could also result from temporary impacts to water quality, temporary loss of upland nesting sites, foraging habitat, disruption of breeding activity, or disturbance of basking sites. Juvenile

southwestern pond turtles typically move from nesting sites in adjacent upland or riparian areas to the stream in the spring (Buskirk, 1992). Hatchlings are very small, often less than one inch, and may be inadvertently trampled during project construction. In addition, access to zooplankton, an important hatchling food source, may be disrupted if water quality were to be severely degraded by project construction.

Two-striped garter snakes typically occur in perennial and intermittent streams with rocky beds bordered by willow thickets or other dense vegetation. This species may also inhabit shallow rivers and stock ponds bordered by thick riparian vegetation that occurs in the Leona Valley. Rathburn et al. (1993) found that these snakes tend to occupy streamside sites during the summer and switch to nearby upland habitats during the winter. Impacts to this species would be similar to those described for south western pond turtles.

~~SCE has indicated that impacts to riparian habitat and areas containing flowing or ponded water would be avoided during construction of the proposed Project.~~ To reduce potential impacts to these species SCE would also conduct pre-construction surveys (APM BIO-1) of the Project area and conduct routine inspections of the ROW by qualified environmental monitors (APM BIO-5). The flagging and avoidance of areas that may support these species (water bodies) (APM BIO-5), and implementation of BMPs to control sedimentation and erosion (APM BIO-4) would reduce impacts to these species. Although construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible the replacement of culverts are unlikely to avoid impacts to some of the drainages. Impacts to aquatic habitat for special-status reptile species (Impact B-18) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measures B-16 (Conduct Pre-construction Surveys for Sensitive Amphibians and Reptiles) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages). Potential erosion from construction would be further minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Birds

Impact B-19: The Project would result in the loss of burrowing owls.

This species was not identified in the project area during surveys and has a low potential to over-winter in burrows that occur in the grassland habitat at the eastern end of the alignment (entirely on non-NFS lands). However, SCE would implement pre-construction surveys for all special-status bird species with potential to occur within the proposed Project ROW prior to construction (APM BIO-1). If burrowing owls are found, occupied burrows would be flagged and avoided as described by APMs BIO-2 and BIO-6. Secondary impacts including noise, sensitivity to humans, and dust would be reduced through the implementation of BMPs (APM BIO-4 and BIO-7). Nesting raptor species are protected by Section 3503.5 of the Fish and Game Code and raptors and non-game birds are protected by the Migratory Bird Treaty Act. Because design of the proposed Project would avoid direct impacts to burrowing owls and would reduce secondary impacts to burrowing owls if they are found to occur. Individual owl burrows that could not be avoided would result in significant impacts without mitigation. However, implementation of Mitigation Measure B-19 (~~Passively~~ Relocate Individual Burrowing Owls During the Non-Breeding Season) would be required in addition the APM to reduce this impact to a less-than-significant level (**Class II**).

Mitigation Measure for Impact B-19

B-19 ~~Passively~~ **Relocate Individual Burrowing Owls During the Non-Breeding Season.** SCE shall conduct pre-construction surveys for the western burrowing owl. Surveys will be conducted prior to ground disturbance activities in areas that contain habitat for this species. Burrows located outside the

project area shall be flagged for avoidance. Un-occupied burrows located in the right of way shall be covered to prevent owls from re-occupying the burrows prior to construction. If active owl burrows are discovered within 300 feet of a tower the owls would be relocated from the burrows using either active or passive techniques as recommended by the CDFG. Owl relocation, as well as discouragement of owls from returning to the site, will occur in the following manner:

- During the non-breeding season (September 1 through January 31), burrowing owls occupying the proposed plant site will be evicted by passive relocation. Passive relocation would include the installation of one-way doors on burrow entrance. Any active burrow would be replaced off-site in adjacent habitat with an artificial burrow. Burrows shall be inspected with a fiber optic camera to ensure animals do not remain in the den.
- If construction would occur during the breeding season (February 1 through August 31) and prior to the relocation of the owls a 300 foot protective buffer would be maintained around burrows occupied by owls until the young have fledged. Other actions could include passive relocation if it is determined that owls have not begun laying eggs or postponement of construction in the area until the young are fledged and no longer dependent upon the nest burrow.
- Once fledglings are capable of independent survival and adult non-breeding owls have successfully been relocated offsite, potential owl habitat (squirrel burrows) would be collapsed in order to keep the owls from returning.

Impact B-20: The Project would result in the loss of foraging habitat or disruption of special-status raptor species.

Ten special-status raptor species have the potential to occur in the proposed Project area. Some of these include golden eagle, sharp-shinned hawk, merlin, northern goshawk, Cooper's hawk, and northern harrier. White-tailed kite, spotted owl, burrowing owl, and prairie falcon also have the potential to forage in and adjacent to the proposed ROW. Impacts to foraging habitat for special-status raptor species would be the same impacts as described for Impacts B-6 and B-10. Temporary and permanent loss of native vegetation communities that provide foraging habitat for special-status raptor species (Impact B-20) would be reduced to less-than-significant (**Class II**) through implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and Impact B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impact B-21: The Project would result in the loss of nesting special-status and migratory birds.

Four special-status raptor species Cooper's hawk, northern harrier, white-tailed kite, and golden eagle have the potential to nest within the proposed ROW. The northern goshawk and prairie falcon likely forage within the Project area, but are unlikely to nest within or immediately adjacent to the ROW. Winter migrant sharp-shinned hawks and merlins have a moderate potential to occur within the Project area but are also unlikely to nest within the ROW since the proposed Project is located outside the known breeding range for these species. Because golden eagles, northern goshawks, prairie falcons, sharp-shinned hawks, and merlins are not likely to nest on site, and because these species are highly mobile, construction activities are not expected to directly impact these raptor species. Three special-status songbird species yellow warbler, yellow-breasted chat, and California horned lark have the potential to nest within or immediately adjacent to the proposed Project ROW.

Potential impacts to sensitive birds are the same as described for Impacts B-6 and B-10. Implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce Impact B-21 to less-than-significant (**Class II**) levels.

Impact B-22: The Project would result in electrocution of special-status bird species.

Golden eagles, northern goshawk, prairie falcon, and other large aerial perching birds are susceptible to the same threats of electrocution as listed bird species (see Impact B-11). Potential impacts to birds from electrocution are discussed in Impact B-13. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1-kV and 69-kV and “the likelihood of electrocutions occurring at voltages greater than 69-kV is extremely low” (APLIC 1996) and would be considered a less-than-significant impact (Class III).

Impact B-23: The Project would result in transmission line collision by special-status bird species.

Potential impacts to birds from collisions with the electrical line are discussed in Impact B-14. Implementation of Mitigation Measure B-14 (Utilize Collision-reducing Techniques) would reduce this impact to a less-than-significant (Class II) level.

Mammals

Impact B-24: The Project would result in loss of special-status bat species.

Numerous sensitive bat species have the potential to occur in the hilly terrain located in the ANF. Some of these include the pallid bat, spotted bat, Townsend’s big-eared bat, and western red bat. These species require mature trees, cliffs, caves, or sheer surfaces for roosting which occur in select areas along the proposed ROW. Construction activities may have an impact on these sensitive bat species if present in areas where that towers are located adjacent to rocky hillsides. This impact would be considered significant if the bats are flushed from nursery colonies. Impacts to roosting bats could be avoided by identifying locations of possible roosting colonies and scheduling work activities to avoid work adjacent to these areas during the breeding season if present. Disruption of hibernacula sites would also be considered a significant impact.

SCE would implement APM BIO-1 pre-construction surveys for all special-status mammal species with the potential to occur within the proposed Project ROW. If present, roosting colonies locations would be flagged and protected (APMs BIO-2 and BIO-5) by restricting construction activities within 200 feet of roosting locations at dusk when bats leave the roost and at dawn when bats return to the roost. Secondary impacts such as noise and dust would be reduced through the implementation of BMPs (APM BIO-4) and mitigation provided for air quality (Mitigation Measure A-1a - Implement Construction Fugitive Dust Control Plan). APMs and Mitigation Measure A-1a would be implemented and the impact would be less than significant (Class III). ~~Townsend’s big-eared bats tend to roost on open, vertical structures such as walls or buildings; therefore, the 66 kV transmission line towers may serve as temporary roosts for individuals of this species but are unlikely to support large colonies and impacts to this species is expected to be minimal. Implementation of Mitigation Measure B-24 (Passively Relocate Individual Bats) would be required to reduce impacts to less than significant levels (Class II).~~

~~Mitigation Measure for Impact B-24~~

~~B-24 Passively Relocate Individual Bats. A qualified biologist shall conduct visual (daytime) and acoustic (nighttime) surveys of bat activity around each 66 kV tower proposed for removal, where access is possible. Bats found roosting on towers will be relocated by a qualified biologist. SCE’s Biological Monitor shall oversee the installation of bat exclusion netting, a bat exclusion device, or the immediate removal of the tower once the bat(s) voluntarily leaves the roosting site.~~

Impact B-25: The Project would result in loss of the American badger.

The American badger has a moderate potential to occur in the chaparral and scrub habitats, primarily within the ANF and the western portion of the alignment. Although no badger dens were noted during surveys within the proposed Project ROW this species is likely to occur. Construction and operation of the transmission line would not result in a barrier for land-bound species like the American badger and would not result in a physical division of territories. However, construction activities including clearing and grading of tower sites could result in impacts to this species. To reduce impacts to this species and other sensitive wildlife, SCE would implement pre-construction surveys for all special-status mammal species with potential to occur within the proposed Project ROW (APM BIO-1). If present occupied badger dens would be flagged and ground-disturbing activities within 300 feet of the dens would be restricted (APMs BIO-2 and BIO-5). Secondary impacts from noise, sensitivity to humans, or dust would be reduced through the implementation of BMPs (APM BIO-4) and Mitigation Measure A-1a (Implement Construction Fugitive Dust Control Plan). If the proposed Project could not avoid removal of an active den, impacts would be potentially significant (**Class II**), but would be reduced to a less-than-significant level with implementation of Mitigation Measure B-25 (Passively Relocate American Badgers During the Non-breeding Season).

Mitigation Measure for Impact B-25

B-25 Passively Relocate American Badgers During the Non-breeding Season. SCE shall survey and identify any badger dens located within the project area and shall be flagged for avoidance. Un-occupied dens located in the ROW shall be covered to prevent the animal from re-occupying the den prior to construction. Occupied dens in the ROW shall be hand-excavated if avoidance is not possible. Dens shall only be hand-excavated before or after the breeding season (February-May). Any relocation of badgers shall take place after consultation with the Forest Service and CDFG.

Impact B-26: The Project would result in loss of special-status rodent species.

Several sensitive rodent species have the potential to occur in sections of the proposed ROW. These include the Los Angeles pocket mouse, southern grass hopper mouse, and the Tehachapi pocket mouse. Although these species have not been observed during recent surveys it is difficult to determine the presence of these species without conducting small mammal trapping.

The Los Angeles pocket mouse has been determined to have a low potential to occur in the Project area. The southern grasshopper mouse has a moderate potential to occur in the Project area. The Tehachapi pocket mouse has a moderate potential to occur in the grassland habitat between Miles 0.0 and 5.0 and coastal scrub and grassland habitat between Miles 21.0 and 25.6. These areas are located outside of NFS lands. Permanent loss of habitat for these two special-status rodent species would occur from the placement of tower footings. Ground-disturbing activities within grassland habitat during construction of new towers, expansion of the Antelope Substation, and removal of the existing 66-kV transmission line and towers could result in direct impacts to Tehachapi pocket mouse and Los Angeles pocket mouse if present. SCE would conduct pre-construction surveys for all special-status mammal species with the potential to occur in the proposed Project ROW as described by APM BIO-1. Direct impacts to sensitive rodents (Impact B-26) would be potentially significant (**Class II**), but would be reduced to a less-than-significant level with implementation of Mitigation Measure B-26 (Avoid Burrow Areas).

Mitigation Measures for Impact B-26

B-26 Avoid Burrow Areas. SCE's Biological Monitor shall flag areas with high concentrations of small rodent burrows and these areas will be avoided to the extent feasible. ~~The Biological Monitor shall be~~

~~present during all work in grassland habitat and will work closely with the equipment operators in order to relocate any rodents that are overturned by ground disturbing activities.~~

Impact B-27: The Project would result in impacts to Management Indicator Species.

Management Indicator Species

Management Indicator Species (MIS) are likely to be subject to various levels of disturbance from implementation of the proposed Project on NFS lands. Although discussed below, many of the ANF MIS are State or federally listed species and have been previously addressed in detail in this EIS/EIR. MIS are listed according to the habitat type or management issue for which they are assigned.

Healthy Diverse Habitats (Mule Deer). Impacts mule deer could be caused by temporary displacement or loss of habitat and accidental death of individuals from travel on access roads. In addition, individuals near the construction area may temporarily abandon their territories due to disturbance from noise and increased human activity. The use of helicopters, which would increase as a result of Mitigation Measure V-4a (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), and construction noise may also reduce the day-time movement of mule deer along the ridge. Mule deer are most vulnerable to construction-related disturbances during their breeding seasons. Mule deer in the vicinity of this proposed Project may be disturbed or scared off as a result of the construction noise, but these impacts would be temporary and limited to the construction phase of the project. To reduce potential impacts, construction vehicles would remain on established roads except for tower construction in order to avoid unnecessary disturbances to wildlife, and vehicles would be required to drive at low speeds on NFS lands, and 15 mph on dirt roads per Mitigation Measure A-1a (Implement Construction Fugitive Dust Control Plan). Although construction may result in temporary impacts to this species, impacts would be considered adverse but not significant (**Class III**).

Fragmentation (Mountain lion). The mountain lion is a far ranging species that has the potential to be present in the designated utility corridor and on non-NFS lands. Populations of this MIS are expected to temporarily decline or disperse during the construction phase of the proposed Project but are expected to return to their pre-construction levels following the restoration of the laydown areas and tower erection sites. Also, as construction is limited to relatively small areas this MIS would likely return to the designated utility corridor as work crews move to new tower locations.

Noise, dust, visual disturbance from increased human activity, and exhaust emissions from heavy equipment during construction could result in native habitats adjacent to the construction zone being temporarily unattractive to wildlife. Construction could impact this MIS 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. However, this cryptic species is rarely seen and would likely move to areas outside the construction corridor if human activities are present. In addition, this species is primarily nocturnal and often hunts during dawn and dusk periods when construction activities would be limited. Likewise, most construction is scheduled to occur along the ridge tops (Del Sur Ridge) where limited foraging potential for this species occurs.

The ANF has indicated the greatest concern to this species is loss of habitat and connectivity between home ranges (USDA, 2005). Construction of the proposed Project would result in some loss of habitat for tower footings, access roads, and construction staging areas. However, much of this would be temporary and region wide only a small percentage of habitat would be permanently removed at each tower location or spur road. In addition, the proposed Project would not result in a physical barrier to dispersal or limit the connectivity

between core habitat areas. Although construction may result in temporary impacts to this species impacts would be considered adverse but not significant (**Class III**).

Montane Conifer Forest (California spotted owl, California black oak, and white fir). Spotted owls may include portions of the designated utility within their home ranges as foraging habitat but are not expected to nest in areas subject to project disturbance. Currently the ANF identifies the greatest threat to this MIS to be the loss of habitat from large stand replacement wildfires (USDA, 2005). Conifer stand and oak woodlands utilized by this species are not expected to be impacted by the proposed project. Potential impacts to this species are the same as described for Impacts B-6 and B-10. Implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce impacts to these species if present to less-than-significant (**Class II**) levels.

White fir and black oak are not present in the designated utility corridor for the proposed Project. Impacts to these MIS would not occur.

Riparian Habitat (Song Sparrow). The primary threat to song sparrows and other riparian birds is the destruction of riparian habitat and loss of water (USDA, 2005). Riparian areas that occur adjacent to access roads at Bouquet Reservoir, San Francisquito Creek, and in Haskell Canyon support habitat on NFS lands that could be utilized by this MIS. In addition, numerous small intermittent drainages on the ANF may also support riparian habitat. Impacts to this species would be avoided through project mitigation. As identified under Impact B-11 the proposed Project would span drainages, avoid impacts to riparian vegetation and riparian conservation areas, and travel would be restricted to existing roads in these sensitive areas. In addition, impacts to song sparrow and other listed riparian bird species (Impact B-11) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds). On NFS lands Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), would be implemented to comply with the Forest Plan. This mitigation measure is required in addition to APMs BIO-1, BIO-4, and BIO-5 to ensure that this MIS is not impacted by the proposed Project.

Aquatic Habitat (Arroyo toad). The arroyo toad is not expected to occur on the designated utility corridor on NFS lands. This species may be present at San Fransquito Creek which is on non-NFS lands. Impacts to this species are described under Impact B-8 and if present would be mitigated to a less-than-significant level (**Class II**) through implementation of Mitigation Measure B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Oak Regeneration (Blue oak, Engleman oak, and Valley oak). Blue oak, valley oak, and Englemans oaks were not identified in the proposed utility corridor and would not be impacted by project construction. Oak woodlands occur in the valley bottoms and drainages at several locations along the designated utility corridor for the proposed Project on NFS lands and along portions of the ROW in Haskell Canyon on non-NFS lands, however, these three MIS were not found within these oak woodlands.

However, as identified under Impact B-2, access to the proposed Project ROW on non-NFS lands would occur primarily on existing roads. Implementation of Mitigation Measure B-2 (Restoration of Coast Live Oak Trees) would reduce this impact to a less-than-significant level (**Class II**).

Bigcone Douglas-fir Forest (Bigcone Douglas-fir). This MIS is not present in the designated utility corridor for the proposed Project. Impacts to this MIS would not occur.

Coulter Pine Forest (Coulter pine). Coulter pine is a major component of lower montane forests which are not present in the designated utility corridor for the proposed Project. Impacts to this MIS would not occur.

Impacts to Jurisdictional Waters and Wetlands (Criterion BIO4)

Impact B-28: The Project would result in the loss of jurisdictional waters and wetlands.

Although a formal jurisdictional delineation was not conducted, numerous jurisdictional drainages and intermittent creeks were noted throughout the Project ROW. Wetlands that fall under the jurisdiction of the USACE and CDFG were noted during the biological reconnaissance surveys in several areas including Bouquet Creek and San Francisquito Creek. Amargosa Creek in Leona Valley is not considered a jurisdictional waterway by the USACE. The primary access to the ROW to the Del Sur Ridgeline would use an existing access road and would avoid impacts to Bouquet Creek. The quarry haul road that may be used as a secondary access road has an existing culvert at the crossing over Bouquet Creek, and impacts to the Creek and its wetland habitat are not expected and would not be authorized under the existing Forest Plan. The proposed transmission line would also span low-lying drainage areas where jurisdictional waters occur. ~~SCE has indicated that these drainages would be spanned by the high voltage lines and disturbance or the removal of riparian communities would not occur.~~ Activities that involve the modification of the bed or bank of a State jurisdictional waterway would be regulated by the CDFG, USACE, and the Regional Water Quality Control Board (RWQCB). ~~SCE has indicated that implementation~~ Implementation of APM BIO-3 would reduce impacts to streambeds and banks located (Obtain a Streambed Alteration Agreement) along the ROW, and would require SCE to obtain and comply with a Streambed Alteration Agreement, if applicable, from the CDFG to minimize ~~would reduce~~ impacts to jurisdictional waters and wetlands ~~riparian vegetation~~ on non-NFS lands.

Although construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (APM BIO-3), the maintenance of existing access roads, construction of new access and spur roads, and installation or replacement of culverts in and adjacent creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the USACE, increased sedimentation in the drainages either directly deposited or through runoff, and/or the obstruction of water flow. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. Impacts to jurisdictional waterways would be considered adverse but not significant. If impacts to State or federal water waters would occur on non-NFS lands, SCE would comply with the requirements of a Streambed Alteration Agreement and the Clean Water Act. Impacts to jurisdictional waters and wetlands (Impact B-28) would be less than significant with no mitigation recommended (**Class III**).

Impacts to Movement of Fish, Wildlife Movement Corridors, or Native Wildlife Nursery Sites (Criterion BIO5)

The majority of drainages in the ROW have intermittent flow and are not expected to provide consistent water to support fish and other wildlife and plant species that are dependent on permanent water sources. However, seasonal flows likely provide access to water for a number of common wildlife species. The exceptions are Bouquet Creek and San Francisquito Creek. Although these creeks also support intermittent flows, they have potential to support fish and other aquatic species that may occur in isolated pools located in their headwaters. Both Bouquet Creek and San Francisquito Creek are tributaries of the Santa Clara River. The proposed transmission line would span San Francisquito Creek and access to either side of the creek would utilize existing paved access roads. Primary access to the ROW would be along the Del Sur Ridgeline beginning at Bouquet Canyon Reservoir and ending at Haskell Canyon, thereby avoiding Bouquet Creek entirely. The quarry haul

road that may be used as a secondary access road has an existing culvert at the crossing over Bouquet Creek and impacts to this Creek are not expected to occur. Therefore, no impacts to the movement of fish within San Francisquito Creek and Bouquet Creek would occur. Native wildlife nursery sites that are associated with these upstream and downstream areas of these creeks would not be affected by the proposed Project, and impacts would be considered not significant.

Impact B-29: The Project would affect linkages and wildlife movement corridors.

Linkages and corridors facilitate regional animal movement, and are generally centered around waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Although many of the smaller drainages and ridgelines provide for wildlife movement, they do not provide a special linkage between areas of open space that are not contiguous. Thus, they are not technically considered a corridor. Rather, they generally provide for local movement of wildlife within large blocks of open space. Although construction of the Project would result in a temporary disturbance to ridgelines and open space, the overall movement of wildlife would not be completely impeded.

San Francisquito Canyon, Haskell Canyon, and Bouquet Canyon serve as wildlife movement corridors that connect the northern portion of the ANF to the Santa Clara River system, which eventually leads to the southern portion of the ANF or coastal mountain ranges and open space. The transmission line would span San Francisquito Canyon and access to either side of the creek would utilize existing paved access roads. Bouquet Canyon is located south of the ROW and would not be affected by the transmission line or access roads to the ROW. Therefore, no impacts to the wildlife movement corridors within San Francisquito Canyon and Bouquet Canyon would occur. Access to the ROW would utilize existing roads in Haskell Canyon. The existing access road is utilized on a regular basis by film crews accessing upper Haskell Canyon as well as by SCE for maintenance of the existing ROW and transmission line corridors. Although vehicle traffic associated with maintenance activities would occur in this area, the activity would be in accordance with existing use of the road and would not result in a new or increased amount of disturbance to this area. Therefore, operation and maintenance of the proposed Project would not result in significant impacts to this corridor. Construction activities would result in a temporary increase in traffic on existing roads in Haskell Canyon. Because the temporary increase in traffic would not completely impede the movement of wildlife and would not affect the nocturnal movement of wildlife, this impact would be less than significant with no mitigation required (Class III).

Conflict with Local Policies or Ordinances Protecting Biological Resources (Criterion BIO 6)

The proposed Project has not been identified as conflicting with the Antelope Valley Areawide General Plan, City of Lancaster General Plan Policy Document, or San Francisquito Canyon Significant Ecological Area No. 19 guidelines. Potential conflicts to other city general plans, county regulations, and ANF policy are discussed below.

Impact B-30: The Project would conflict with Los Angeles County's oak tree ordinance.

Access to the transmission line ROW would require the utilization of roads that would traverse through Coast Live Oak Riparian Forest habitat entirely on non-NFS lands. The majority of this sensitive natural community occurs in Haskell Canyon which already has several existing access roads. In addition, new access and spur roads would be constructed in Haskell Canyon and also in close proximity to the oak woodland habitat. Even though removal of oak trees would be avoided and existing roads would be utilized without improvement to the

maximum extent possible, the transport of large and heavy equipment through these areas during construction may result in damage to individual oak trees, limbs, and/or their root systems. SCE would comply with the regulations identified in the ordinance and would apply mitigation for potential losses to oak trees caused by the proposed Project. In addition, implementation of Mitigation Measure B-2 (Restoration of Coast Live Oak Trees) would ensure impacts to oak trees are reduced to less-than-significant levels (**Class II**).

Impact B-31: The Project would conflict with the Angeles National Forest Land Management Plan direction for construction within Riparian Conservation Areas within the ANF.

Part 2, Appendix B of the Forest Plan directs that the ANF Manage Riparian Conservation Areas (RCA) to maintain or improve conditions for riparian dependent resources. Riparian Conservation Areas include aquatic and terrestrial ecosystems and lands adjacent to perennial, intermittent, and ephemeral streams, as well as around meadows, lakes, reservoirs, ponds, wetlands, vernal pools, seeps, and springs and other bodies of water. The Forest Service has identified a Five-Step Screening Process (Process) for Riparian Conservation Areas which is used to ensure that RCA's are recognized, emphasized, and managed appropriately during new project planning and implementation (USFS, 2005). This Process identifies the methodologies utilized to identify the appropriate buffer distance for each RCA. For example, Step-1 of the Process identifies the RCA for perennial streams to 328 feet (100 meters) on each side of the stream. However, Under Step-2 this width could be expanded if sensitive biological resources were identified in the RCA. Step-3 requires that the project be screened against the riparian and aquatic desired conditions and recovery plans for federally listed riparian species to determine if the project is either neutral or will move the area closer towards the desired conditions. At this point, the project may move forward to Step-4 or be denied, modified, or require the completion of a land management plan amendment. If the project moves to Step-4 the project would be screened against the forest plan riparian management objectives to ensure the project incorporates one or more of the listed strategies. One component of this is to evaluate physical and biological characteristics of the stream. At Step-5 the project would reference the Forest Service handbook for specific guidance regarding the management tactics to apply when conducting activities within RCA's.

Riparian dependent resources are those natural resources that owe their existence to the area, such as fish, amphibians, reptiles, fairy shrimp, aquatic invertebrates, plants, birds, mammals, soil and water quality. Any construction conducted within RCA's on the ANF including intermittent drainages, and creeks would be in conflict with the ANF Forest Plan and would not be authorized by the ANF. To comply with the Forest Plan, the proposed Project would implement Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), thereby eliminating any potential for conflict with the Forest Plan (**Class III**).

Impact B-32: The Project would conflict with the City of Santa Clarita General Plan's policies for construction in or adjacent to drainages or waterways.

The City of Santa Clarita General Plan has construction restrictions while working in or adjacent to drainages and waterways. Construction restrictions include avoidance of construction during breeding and migration periods, avoiding disturbance of areas that would remove watershed vegetation, minimizing excavations that would result in changes in the stream flow or increase siltation, and preventing activities that would contribute pollutants to the water of San Francisquito Creek and the Santa Clara River. Implementation of APMs BIO-2 (Restriction of native vegetation removal), BIO-3 (Avoid impacting the streambeds and banks of any streams along the route to the extent feasible), BIO-4 (Crews would be directed to use BMPs where applicable), and BIO-5 (SCE would assign Biological Monitors to the Project) as standard operating procedure would reduce conflicts with the General Plan. However, road maintenance, new access road construction, and replacement of

culverts would conflict with the General Plan. Proposed Project activities that would conflict with the Santa Clarita General Plan (Impact B-32) would be reduced to a less-than-significant level (**Class II**) through implementation of Mitigation Measures B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds), B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages), and B-26 (Avoid Burrow Areas).

Impacts to HCPs, NCCPs, or other approved local, regional, or State HCP (Criterion BIO7)

Although the West Mojave HCP has not been approved by the agencies, the Final EIS/EIR (prepared 2005) has been reviewed and taken into consideration. Impacts to this HCP, in the event that a Biological Opinion agrees with the findings of the West Mojave's Final EIS/EIR, are discussed below.

Impact B-33: The Project would conflict with the proposed West Mojave Habitat Conservation Plan (HCP).

Construction guidelines for construction of utility lines are included as part of the proposed West Mojave HCP in order to minimize impacts to raptor species. These guidelines require utility design of transmission lines to comply with *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996* (APLIC 1996). Failure to incorporate raptor protection measures would be in conflict with the Draft West Mojave HCP and would be significant if this document is finalized during the life of the project. As SCE has committed to implementation of the raptor protection plan mentioned above, Impact B-33 would be less than significant with no mitigation required (**Class III**).

C.3.6 Alternative 1: Partial Undergrounding of Antelope-Pardee Transmission Line

C.3.6.1 Affected Environment

C.3.6.1.1 Literature Review

Alternative 1 is located within the same area as the proposed Project. Therefore, information from the literature search that was conducted for the proposed Project provided information for this Alternative.

C.3.6.1.2 Survey Methodology

Field surveys for sensitive plants and wildlife were conducted along sections the route that differed from the proposed Project, specifically between Miles 11.0 and 15.0 and between Miles 22.7 and 26.2. The same methodology and survey parameters were utilized as described in Section C.3.1.2 (Survey Methodology) for the proposed Project. The field survey was conducted between sunrise and 4:00 p.m. on February 8-9, 2006. Weather conditions during the survey consisted of clear skies, temperatures between 68 degrees Fahrenheit (°F) and 98 °F, and winds of 0-2 miles per hour (mph) with periodic gusts of up to 15 mph.

C.3.6.1.3 Alternative 1 Existing Conditions

The affected environment for Alternative 1 is largely the same as the proposed Project. Alternative 1 would generally follow the same route as the proposed Project, with the exception of the underground segment in Santa Clarita, which would occur within city streets. Underground construction on NFS lands would occur along the Del Sur Ridge and would begin just south of Mile 11.0 and continue until just south of Mile 15.0. In Santa Clarita, underground construction would begin at Mile 22.7 and continue until Mile 26.2 (Pardee

Substation). This Alternative would also require the construction of a 16-foot-wide all-weather access road along the existing Del Sur Ridge Road to support drilling equipment and material deliveries.

The transition stations and proposed access road locations within the ANF would be located in areas characterized by chamise chaparral. Much of the habitat in this area was subject to wildfires during the past 5 years and remains in varying states of succession. A fuel break also occurs in this area along the top of the ridgeline. The transition station for the Santa Clarita underground segment would be located west of the existing corridor and proposed route, on the east side of San Francisquito Canyon Road, near Copper Hill Drive. This area consists of a dirt access road that supports a private residence and the existing SCE ROW. Low-lying areas consist of bare ground and ruderal vegetation. Coastal sage scrub and chaparral habitat occurs on the adjacent hillsides. From the transition station, the underground transmission line ROW would occur within the paved road limits and disturbed road shoulders. The vegetation communities identified for Alternative 1 are the same as for the proposed Project and are shown on Figures C.3-1A, C.3-1B, and C.3-1C.

C.3.6.2 Impacts and Mitigation Measures

Impacts on Riparian or Sensitive Natural Communities (Criterion BIO1)

Construction of this Alternative would result in the same types of impacts to native vegetation communities impacts (Impact B-1) and oak trees (Impact B-2) as the proposed Project. However, the construction of this alternative has the potential to result in increased impacts to native vegetation communities located in the ANF. Underground construction would require the establishment of a 16 foot all weather access road and has the potential to result in the removal of chaparral habitat that occurs along Del Sur Ridge. Construction of the transition stations at each end of the two underground segments would also result in the permanent removal of approximately 2 to 3 acres of native vegetation, primarily chaparral and coastal sage scrub habitat, and the permanent removal of vegetation at the location of the transition stations.

The conversion of the existing Del Sur Ridge Road (Forest Road 6N18) to an all weather access road would involve grading and fill activities and could result in soil erosion and sedimentation to riparian areas along Bouquet Creek and other natural communities that occur downhill from the ridge. Temporary construction activities would also result in the loss of topsoil at temporary staging areas at the locations of the transition stations. Impacts B-1 and B-2 for Alternative 1 would be considered less-than-significant (Class II) with the implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), B-1b (No Activities will occur in Riparian Conservation Areas), B-2 (Restoration of Coast Live Oak Trees), and B-4 (Implement Weed Control Measures). In addition, Mitigation Measure B-1c (Topsoil Salvage) would be required, particularly to minimize Impact B-1 for Alternative 1.

Mitigation Measure for Impact B-1:

B-1c Topsoil Salvage. SCE shall ensure the upper 6-12 inches of topsoil, depending on existing depth of topsoil, shall be salvaged and replaced wherever trenching is required through open land, including shared utility corridors, but not including graded roads and road shoulders. Topsoil shall not be used to backfill the trench, and excavated trench spoils or excess fill shall not be dispersed onto the surface of the ROW. Topsoil shall be windrowed separately from trench spoils. Implementation of this measure during construction shall be verified by a qualified environmental monitor acceptable to the CPUC and the ANF.

Impacts from Alternative 1 would also result in an increased loss of approximately 14 acres of foraging habitat for common wildlife and raptors (Impact B-3) compared to the proposed Project. Construction may also result

in the temporary degradation or value of adjacent native habitat areas due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. Depending on the timing and location of project activities construction may also result in the temporary disruption along terrestrial and riparian wildlife movement corridors crossed by the project. The disturbance of large areas of native vegetation may also increase the potential for the invasion of exotic plants (Impact B-4). Although implementation of this Alternative would increase potential impacts from underground construction, these impacts would be considered adverse but less-than-significant (**Class II**) with the implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-4 (Implement Weed Control Measures).

Direct loss of small mammals, reptiles, and other less mobile species from trenching and construction of the transition station sites (Impact B-5) would be similar to the proposed project. Although this Alternative could result in an increase in mortality to common wildlife due to the increase of total disturbance from underground cable installation, road grading, and construction of the transition station impacts would be considered adverse but less than significant (**Class III**).

Clearing and grading under this Alternative would generate the greatest construction impacts on wildlife especially in undisturbed portions of the ANF. Removal of vegetation during the construction phase of this project would temporarily diminish the amount of habitat available for nesting birds (Impact B-6). Implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce Impact B-6 to less-than-significant levels (**Class II**).

Impacts on Endangered or Threatened Species, or Proposed or Critical Habitat (Criterion BIO2)

Plants

Alternative 1 is located largely in the same area and habitat type as the proposed Project. Construction activities associated with Alternative 1 would result in the same potential impacts to listed plant species (Impact B-7) as the proposed Project on both non-NFS and NFS lands. To reduce potential impacts to listed plant species, SCE would conduct pre-construction surveys for all listed plants with the potential to occur in the proposed Project ROW (APM BIO-1). SCE would also implement APMs BIO-2, BIO-4, BIO-5, and BIO-6 which require the establishment and flagging of avoidance zones, conducting biological monitoring during construction, minimization of dust and runoff, and biological training for all Project staff. Impacts to listed plant species (Impact B-7) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-7 (Conduct Surveys for Listed and Sensitive Plant Species).

Wildlife

Amphibians

For this Alternative trenching for the underground segment of the line would occur on both vegetated NFS lands and within the limits of paved roads, bridges, and disturbed road shoulders in areas outside the ANF. At San Francisquito Creek, the transmission line would be placed on the existing bridge in metal casings. As arroyo toads have the potential to occur in San Francisquito Creek adjacent to the Alternative 1 ROW potential impacts to this species could occur if present. However, arroyo toads were not identified at this location during focused surveys conducted by Aspen in the spring of 2006. Potential impacts to arroyo toads (Impact B-8) from trenching activities and placement of the conduit on the bridge spanning San Fransquito Creek would be similar to the proposed Project. Potential impacts to arroyo toad would not occur on NFS lands.

Impacts to arroyo toad, if present, could occur from this Alternative if stockpiled material entered the creek during winter storms. Because of the cryptic nature of this species, if present in this area, arroyo toad could also be subject to potential mortality if construction crews require access to the creek bed located below the bridge. Actions that result in the take of federally listed species would be authorized under the context of a Biological Opinion. Impacts to arroyo toads and to breeding and upland habitat for this listed amphibian species (Impact B-8) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measures B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Alternative 1 would result in the same potential impacts as the proposed Project to California red-legged frog (Impact B-9). As such, the Alternative 1 would have the potential to result in a may affect, but not likely to adversely affect determination to this species. Red legged frogs have the potential to occur on non-NFS lands in the Leona Valley near Armargosa Creek. This portion of Alternative 1 would be subject to the same construction techniques as the proposed Project. Potential impacts to red legged frogs, if present, would be considered less than significant (**Class II**) with the implementation of Mitigation Measure B-9 (Conduct Focused Surveys for California Red-legged Frog) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Fish

Potential impacts from Alternative 1 to listed fish would be the same as the proposed Project. With the exception of the underground portion of the transmission line and transition stations located on NFS lands and the underground section located on Copper Hill Road, Alternative 1 would not result in impacts to riparian areas supporting listed fish. Similar to the proposed Project, construction activities would not impact Bouquet Creek, and impacts to Santa Ana sucker or unarmored threespine stickleback are not expected to occur. This elevated bridge was upgraded in 2005 and would allow construction vehicles to avoid impacts to riparian areas. In addition, to comply with the Forest Plan no impacts within RCA's shall occur. If SCE intends to conduct any improvements to the existing culvert crossing at Bouquet Creek, these activities would be considered to be potentially significant (**Class II**) and would be authorized by the Forest Service. To comply with the ESA, the ANF would consult with the USFWS and develop mitigation conditions through the context of a biological opinion.

Potential erosion from mass grading on the ridge line are addressed in Section C.5.5 (Geology, Soils, and Paleontology) and would be minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion). With the implementation of these measures, indirect impacts from erosion would be considered a less-than-significant impact (**Class II**).

Birds

Alternative 1 would result in the same type of impacts to foraging habitat for listed raptor species (Impact B-10), and riparian habitat for listed bird species (Impact B-11) as the proposed Project. The installation of the underground portion of Alternative 1 would result in approximately twice the total level of disturbance to potential foraging habitat (45 acres compared to 85 acres) on NFS lands when compared to the proposed Project. This would occur primarily on the Del Sur Ridge Road (Forest Road 6N18). Although the total acreage of impacts to foraging habitat utilized by raptors would increase, these impacts would be largely temporary and occur in areas that support limited foraging value. Impacts to high value forage areas that support large populations of rodents such as non-native grassland, riparian areas, and coastal sage scrub communities would

be the same as the proposed Project. Temporary and permanent loss of native vegetation communities that provide foraging habitat for listed raptor species (Impact B-10) would be reduced to less-than- significant levels (**Class II**) through implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impacts to Coastal sage scrub that could support coastal California gnatcatchers (Impact B-12) would also be the same as the proposed Project. Impacts to coastal California gnatcatchers (Impact B-12) if present would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-12 (Conduct Protocol Surveys for California Gnatcatchers). This mitigation measure is required in addition to APMs BIO-1, BIO-4, and BIO-5 to ensure that coastal California gnatcatchers and their habitat are not affected by the proposed Project.

Impacts to sensitive birds from electrocution would also be the same as the proposed Project (Impact B-13). As described in the proposed Project, the majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1-kV and 69-kV and “the likelihood of electrocutions occurring at voltages greater than 69-kV is extremely low” (APLIC 1996). Therefore impacts from potential electrocutions would be considered potentially adverse but less than significant (**Class III**). However, in order to further reduce potential impacts from electrocutions to raptors on NFS lands and to comply with the ANF Forest Plan standards, Mitigation Measure B-13 (Raptor safety protection will be required on tower/conductor (lines) of NFS lands) would be implemented.

The placement of the transmission line in underground portions on the ANF may result in a decrease in the potential for bird strikes and line-collisions (Impact B-14) when compared to the proposed Project. This is may be important along the Del Sur Ridge portion of the designated utility corridor on NFS lands and may result in beneficial impacts to the California condor. As described for the proposed Project, California condors are known to utilize expansive areas during flight and may periodically overfly the Del Sur ridge line. However, the potential for bird strikes is considered low and bird collisions (Impact B-14) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-13 (Raptor Protection) and B-14 (Utilize Collision-Reducing Techniques). Similar to the proposed Project, implementation of Alternative 1 activities may affect, but are not likely to adversely affect the California condor and could result in long term beneficial effects to this species by removing the transmission line from the ridge line.

Impacts to sensitive birds may also occur from this Alternative due to the development of two transition stations located on the Del Sur Ridge (NFS lands) and the two sites located on non-NFS lands. New sources of light from the transition stations could adversely affect wildlife such as nesting birds or foraging mammals. Lighting may also disrupt migratory movement or increase the potential for bird strikes. As identified in Section 16.2.6 (Visual Resources), each transition station would need to have outdoor and indoor lighting; however, the outdoor lighting would not have to be on all the time. Lighting would be switched on when SCE employees or contractors were working in the station. At the entrance gate, SCE may propose motion-activated lighting to illuminate the locked gate at night. Motion-activated lighting can be triggered by animals as well as maintenance vehicles, and therefore, would create adverse lighting effects in the nighttime landscape even when no maintenance vehicle is present. The presence of nighttime lights at the two transition stations on Del Sur Ridge would be unusual and may result in the disruption of nocturnal wildlife and would be considered a potential significant impact without mitigation. Implementation of Mitigation Measures V-17b (Use Magnetic Coils at Entrance Gate) and V-17c (Use Only Low-Level, Directional, Shielded Lighting), and V-17d (Only Perform

Maintenance Activities During Daylight Hours) would reduce potential impacts to less-than-significant levels (Class II).

Impacts on Candidate, Sensitive, or Special-Status Species (Criterion BIO3)

Plants

Alternative 1 would result in the same potential impacts as the proposed Project to special-status plant species (Impact B-15). Although construction of this Alternative would result in a substantial increase in disturbance to vegetation communities on NFS lands, this area consists of recently burnt chamise chaparral and the existing Del Sur Ridge Road (Forest Road 6N18). Although potentially adverse and larger in scope than the proposed Project these impacts would be considered adverse but less than significant (Class II) with the implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), B-1b (Topsoil Salvage), B-4 (Implement Weed Control Measures), and B-7 (Conduct Surveys for Special Status Plants).

Wildlife

Amphibians

Alternative 1 would result in the same general impacts to habitat for special-status amphibian species (B-16) as the proposed Project. Clearing and grading for the new transition stations for the underground portion of the segment would not occur in habitat utilized by special status amphibians on NFS lands. Temporary and permanent loss of native vegetation communities that provide habitat for special-status amphibian species in (Impact B-16) would be reduced to a less-than-significant level (Class II) through implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-16 (Conduct Pre-construction Surveys for sensitive Amphibians and Reptiles). Potential indirect impacts to amphibians or aquatic resources that may occur in the creek from increased erosion potential are not expected to result in adverse impacts. ~~SCE has indicated that pre-construction~~ Implementation of surveys APM BIO-1 and Mitigation Measure B-16 would require the flagging and avoidance of bodies of water that could potentially support breeding pools for special-status amphibian species. In addition, implementation of APM BIO-5 and Mitigation Measure B-16 would require monitoring by a qualified biologist during construction to ensure that all restricted (flagged) areas are protected, and that individual species identified within construction zones are moved out of harms way. and implementation of Application of BMPs to control sedimentation and erosion near these bodies of water and all drainages (APM BIO-4) would also avoid reduce direct impacts to these species. In addition, Potential erosion from grading on the ridge line or access roads would be further minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Fish

Implementation of Alternative 1 would result in the same potential impacts to special-status fish species as the proposed Project. The arroyo chub is known to occur in San Francisquito Creek and lower portions of Bouquet Creek, both tributaries to the Santa Clara River. The Santa Ana speckled dace has a low potential to occur within Bouquet Creek. However, construction activities are not expected to impact these waterways. At San Francisquito Creek the transmission line would span the area and impacts to habitat that could support sensitive fish are not expected to occur. In addition, the primary access road to the Del Sur Ridgeline (Forest Road 5N24) would not cross wetted portions of Bouquet Creek. A quarry haul road that may be used as a secondary access road (Forest Road 6N19) would cross Bouquet Creek at an existing raised crossing. As the proposed

Project would not impact Bouquet Creek, impacts to arroyo chub and Santa Ana speckled dace if present are not expected to occur. As the proposed Project is not anticipated to encroach upon Bouquet Creek, impacts to Santa Ana sucker or unarmored threespine stickleback are not expected to occur. However, road improvements associated with the existing crossing of Bouquet Creek may trigger the need to improve an existing culvert to prevent its failure. Per the requirements of Mitigation Measure B-1b, activities associated with the culvert's improvements would be required to avoid impacts to Bouquet Creek. With implementation of this mitigation measure, and the stipulations of Mitigation Measure B-8b, potential impacts to the unarmored threespine stickleback and Santa Ana sucker would be reduced to a less-than-significant level (Class II). However, should culvert improvement activities be unable to avoid Bouquet Creek, potentially significant impacts to these species could occur. Consequently, prior to any work within Bouquet Creek, SCE would be required to obtain authorization from the USFS. To comply with the ESA, prior to issuance of an authorization, the USFS would consult with the USFWS and develop appropriate mitigation measures for culvert improvement activities within the context of a Biological Opinion.

However, to further reduce potential erosion related impacts from grading on the Del Sur Ridge or along access roads Mitigation Measures APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion) would be implemented.

Reptiles

Alternative 1 would result in the same general impacts to sensitive aquatic (Impact B-17) and terrestrial reptiles (Impact B-18) as the proposed Project. Although a greater area would be cleared for the transition station sites these impacts would result in similar effects to terrestrial wildlife. Impacts to aquatic habitat for special-status reptile species (Impact B-18) would be reduced to a less-than-significant level (Class II) with the implementation of Mitigation Measures B-16 (Conduct Pre-construction Surveys for Sensitive Amphibians and Reptiles) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Mitigation Measures B-16 (Conduct Pre-construction Surveys for Sensitive Amphibians and Reptiles) and B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) would be implemented to reduce Impact B-17 to less than significant (Class II).

Birds

Alternative 1 would result in the same impacts to burrowing owls (Impact B-19) as the proposed Project. Implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) and B-19 (~~Passively~~-Relocate Individual Burrowing Owls During the Non-Breeding Season) would be required to reduce this impact to less than significant (Class II).

Implementation of Alternative 1 would have the same impacts to foraging habitat for special-status raptor species (Impact B-20) as identified in the proposed Project, although the total area impacted on NFS lands would be greater. Temporary and permanent loss of native vegetation communities that provide foraging habitat for special-status raptor species (Impact B-20) would be reduced to adverse but less-than-significant levels (Class II) through implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and Impact B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impacts of Alternative 1 to nesting habitat for special-status and migratory bird species (Impact B-21) are also the same as the proposed project. It is likely that larger numbers of birds have the potential to be displaced due

to the increased disturbance in the area and potential loss of habitat compared to the proposed Project. However, potential impacts to sensitive birds would be similar as described for Impacts B-6 and B-10. Implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce Impact B-21 to less-than-significant (**Class II**) levels.

Alternative 1 would result in the same threats of electrocution to listed bird species as the proposed Project (Impact B-22). Potential impacts to birds from electrocution are discussed in Impact B-13. The majority of raptor electrocutions are caused by lines that are energized at voltage levels between 1 kV and 69 kV and “the likelihood of electrocutions occurring at voltages greater than 69 kV is extremely low” (APLIC 1996) and would be considered a less-than-significant impact (**Class III**). However, in order to further reduce potential impacts from electrocutions to raptors on NFS lands and to comply with the ANF Forest Plan standards, Mitigation Measure B-13 (Raptor safety protection will be required on tower/conductor (lines) of NFS lands) would be implemented.

Similar to that described above for listed species the placement of the transmission line in underground portions on the ANF may also result in a decrease in the potential for bird strikes and line-collisions (Impact B-23) when compared to the proposed Project. However, the potential for bird strikes is considered low and bird collisions (Impact B-23) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-13 (Raptor Protection) and B-14 (Utilize Collision-Reducing Techniques).

The presence of nighttime lights at the two transition stations on Del Sur Ridge would be also be similar to that described for listed birds. Implementation of Mitigation Measures V-17b (Use Magnetic Coils at Entrance Gate) and V-17c (Use Only Low-Level, Directional, Shielded Lighting), and V-17d (Only Perform Maintenance Activities During Daylight Hours) would reduce potential impacts to less-than-significant levels (**Class II**).

Mammals

Although the general level of disturbance would be greater for underground construction, Alternative 1 would result in the same potential impacts as the proposed Project to special-status bat species (Impact B-24), American badger (Impact B-25), and special-status rodent species (Impact B-26) on both NFS and private lands. Impact B-24 would be considered less than significant (**Class III**), and Impacts B-25 and B-26 ~~These impacts~~ would be considered adverse but would be considered less than significant (**Class II**) with the implementation of Mitigation Measures ~~B-24 (Passively Relocate Individual Bats)~~, B-25 (Passively Relocate American Badgers During the Non-breeding Season), and Mitigation Measure B-26 (Avoid Burrow Areas).

Management Indicator Species

Impacts to each specific MIS are addressed below. In general under Alternative 1 the increased disturbance from the installation of the underground transmission line and construction of the transition sites are likely to increase potential impacts to MIS on NFS lands.

Healthy Diverse Habitats (Mule Deer). Under Alternative 1 potential impacts to mule deer would increase due to the larger area required for underground construction. Construction related activity would also result in a greater loss of habitat and would increase the time of temporary displacement of mule deer from the project area. In addition, open trenching required for this type of construction could lead to the entrapment of mule deer and other wildlife in the trenchline. Potential impacts to mule deer and other terrestrial MIS (Impact B-27) would be reduced to less-than-significant (**Class II**) levels through implementation of Mitigation Measure 27 (Exclusion Fencing and Wildlife Ramps).

Mitigation Measure for Impact B-27

B-27 Exclusion Fencing and Wildlife Ramps. SCE shall install a temporary fence and provide wildlife escape ramps for construction areas that contain steep walled holes or trenches on NFS and private lands. The temporary fence shall be constructed of materials that are approved by the CPUC and ANF. Sections of open trench shall be inspected by the biological monitor each morning to ensure no wildlife is present in the trench. If present, construction shall not occur until the animal has left the trench or been removed by a qualified biological monitor.

Fragmentation (Mountain lion). Implementation of Alternative 1 has the potential to increase potential impacts to this MIS compared to the proposed Project. Large areas of open trench or human activity may limit the presence of the species in this section of the ANF however; this is a far ranging species that would likely disperse from the area during the construction phase. Although adverse, impacts to mountain lion would be considered less-than-significant (**Class III**). In an effort to further reduce potential impacts to this species Mitigation Measure B-27 (Exclusion Fencing and Wildlife Ramps) would be implemented on NFS lands for this species.

Montane Conifer Forest (California spotted owl, California black oak, and white fir). Impacts to this MIS would be similar to the proposed Project. The proposed underground section of transmission line located on NFS lands would not occur in breeding habitat utilized by this species. It is possible that some foraging may occur in the vicinity of the designated utility corridor in areas where the above ground transmission line would be located. Potential impacts to this species are the same as described for Impacts B-6 and B-10. Implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce impacts to these species if present to less-than-significant (**Class II**) levels.

White fir and black oak are not present in the designated utility corridor for the Alternative 1. Impacts to these MIS would not occur.

Riparian Habitat (Song Sparrow). Impacts to this MIS guild would be similar to the proposed Project. The proposed underground section of transmission line located on NFS lands would not occur in habitat utilized by this bird assemblage. As identified under Impact B-11 the proposed Project would span drainages, avoid impacts to riparian vegetation, and travel would be restricted to existing roads in these sensitive areas. In addition, impacts to listed riparian bird species (Impact B-11) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds). On NFS lands Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), would be implemented to comply with the Forest Plan. This mitigation measure is required in addition to APMs BIO-1, BIO-4, and BIO-5 to ensure that this MIS is not impacted by the implementation of Alternative 1.

Aquatic Habitat (Arroyo toad). The arroyo toad is not expected to occur on the designated utility corridor on NFS lands. Impacts to this species would be the same as the proposed Project. Impacts to this species on non-NFS lands are described under Impact B-8 and if present would be mitigated to less-than-significant level (**Class II**) through implementation of Mitigation Measure B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Oak Regeneration (Blue oak, Engleman oak, and Valley oak). Blue oak, valley oak, and Englemans oaks were not identified in the proposed utility corridor and would not be impacted by Alternative 1. Oak woodlands occur in the valley bottoms and drainages at several locations along the designated utility corridor for the

proposed Project on NFS lands and along portions of the ROW in Haskell Canyon on non-NFS lands, however, these three MIS were not found within these oak woodlands.

Bigcone Douglas-fir Forest (Bigcone Douglas-fir). These MIS are not present in the designated utility corridor for the Alternative 1 and would not be impacted by construction.

Coulter Pine Forest (Coulter pine). Coulter pine is a major component of lower montane forests which are not present in the designated utility corridor for Alternative 1. Impacts to this MIS would not occur.

Impacts to Jurisdictional Waters and Wetlands (Criterion BIO4)

Alternative 1 would result in the same impacts as the proposed Project to jurisdictional waters and wetlands (Impact B-28) and would be considered less than significant (**Class III**).

Impacts to Movement of Fish, Wildlife Movement Corridors, or Native Wildlife Nursery Sites (Criterion BIO5)

Alternative 1 would result in the same impacts to linkages and wildlife movement corridors as the proposed Project (Impact B-29). Although trenching along Del Sur Ridge would likely result in increased land disturbance region wide, the total construction involved in the placement of the underground transmission line and transition stations is not expected to result in a substantial degradation or abandonment of movement corridors or native nursery sites. As described by the proposed Project, these impacts are considered less than significant (**Class III**) and no mitigation is required. Because the temporary increase in traffic would not completely impede the movement of wildlife and would not affect the nocturnal movement of wildlife, this impact would be less than significant with no mitigation recommended (**Class III**). However, the implementation of Mitigation Measure B-27 (Exclusion Fencing and Wildlife Ramps) would be implemented on NFS lands to further reduce potential impacts to wildlife movement.

Conflict with Local Policies or Ordinances Protecting Biological Resources (Criterion BIO 6)

Alternative 1 would result in the same impacts to Los Angeles County's oak tree ordinance (Impact B-30), ANF's Management Plan (Impact B-31), and the City of Santa Clarita's General Plan (Impact B-32) as the proposed Project. To comply with the Forest Plan, Alternative 1 would implement Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), thereby eliminating any potential for conflict with the Forest Plan (**Class III**).

Proposed Project activities that would conflict with the Santa Clarita General Plan (Impact B-32) would be reduced to a less-than-significant level (**Class II**) through implementation of Mitigation Measures B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds), B-8b (Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages), and B-26 (Avoid Burrow Areas).

Impacts to HCPs, NCCPs, or other approved local, regional, or state HCP (Criterion BIO7)

Alternative 1 would result in the same potential impacts as the proposed Project to the proposed West Mojave HCP. As SCE has committed to implementation of the raptor protection plan mentioned above, Impact B-33 would be less than significant with no mitigation recommended (**Class III**).

C.3.7 Alternative 2: Antelope-Pardee East Mid-Slope

Alternative 2 would follow the same route as the proposed Project, but would relocate most of the towers off the top of Del Sur Ridgeline in the ANF, roughly between MPs 5.7 and 17.5. This is in response to the Forest Service request to reduce visual impacts of the proposed alignment. Alternative 2 would also re-position the alignment to the east and south side of Bouquet Reservoir. The towers would be located outside the boundaries of the existing 1,000-foot wide transmission line designated utility corridor on NFS lands in order to reduce the visibility of towers on the ridge. The distance of the new alignment from the proposed Project and the height of individual towers (ranging between 113 to 178 feet) would be dependent on the severity of the existing topography. The towers would be located mid-slope between the ridge top and the canyon bottom on the eastern face of Del Sur Ridge and would result in 12.2 miles of new ROW through the 13.2 mile portion of the proposed Project that would occur on NFS lands. Similar to the proposed Project, this alternative would include removal of approximately 119 of the existing 66-kV towers, which would be cut flush with the surface along the Saugus-Del Sur corridor.

C.3.7.1 Affected Environment

C.3.7.1.1 Literature Review

Alternative 2 is located within the same area as the proposed Project. Therefore, the information from the literature search that was conducted for the proposed Project was utilized to provide information for this Alternative.

C.3.7.1.2 Survey Methodology

Field surveys for sensitive plants and wildlife were conducted on sections of the route that differed from the proposed Project; specifically along the eastern-facing slope, mid-slope from Del Sur Ridge, and the east side of Bouquet Reservoir between Miles 5.7 and 17.5. The same methodology and survey parameters were utilized as described in Section C.3.1.2 (Survey Methodology) for the proposed Project. The field survey was conducted between sunrise and 4:00 p.m. on February 8-9, 2006. Weather conditions during the survey consisted of clear skies, temperatures between 68 degrees Fahrenheit (°F) and 98 °F, and winds of 0-2 miles per hour (mph) with periodic gusts of up to 15 mph.

C.3.7.1.3 Alternative 2 Existing Conditions

The affected environment for Alternative 2 is largely the same as the proposed Project as described in Section C.3.1.3 (proposed Project Existing Conditions) and as shown by Figures C.3-1A, C.3-1B, and C.31C (Vegetation Communities Map). Alternative 2 would follow the same route as the proposed Project, but would relocate most of the towers off the top of Del Sur Ridgeline to the east in the ANF, roughly between Miles 5.7 and 17.5. Much of the habitat in this area is characterized by chaparral that was subject to wildfires during the past 5 years and remains in varying states of succession. This Alternative crosses several more ephemeral and intermittent drainages, some supporting oak riparian habitat, than the proposed Project; however, all of these drainages would be spanned by the powerlines and would be avoided during placement of the towers to comply with the Forest Plan. Drainages located on the eastern slope of the Del Sur Ridge flow into Bouquet Creek, an area known to support a variety of sensitive riparian species including three-spined stickleback and arroyo chub. Ground disturbance associated with tower construction would be minimized by using hand crews that access the ROW by helicopter or from nearby access roads. In addition, this Alternative would require approximately 0.3 miles of new access roads ~~when~~ compared to 1.05 miles for the proposed Project. These new roads are required where the proposed tower locations require access to ensure safe construction practices. The vegetation communities identified for Alternative 2 are the same as for the proposed Project and are shown on Figures C.3-5A and C.3-5B.

C.3.7.2 Impacts and Mitigation Measures

Impacts on Riparian or Sensitive Natural Communities (Criterion BIO1)

Construction of this Alternative would result in the same types of impacts to native vegetation communities impacts (Impact B-1) and oak trees (Impact B-2) as the proposed Project. However, while Alternative 2 would follow the same route as the proposed Project, most of the towers on NFS lands would be located down slope of the Del Sur Ridgeline in native vegetation communities between Miles 5.7 and 17.5. This would require the placement of approximately 66 towers on NFS lands and 0.3 miles of new and/or improved spur roads compared to 1.05 miles for the proposed Project. This would result in a net reduction of overall land disturbance resulting in total permanent land disturbance of 21.18 acres, a net reduction of approximately 0.92 acres when compared to the proposed project.

The relocation of the towers off the top of the Del Sur Ridge Road would involve mid-slope construction which could result in increased soil erosion and sedimentation to riparian areas on Bouquet Creek and other natural communities that occur down slope from the ridge. The permanent loss or temporary disturbance of native vegetation communities would be slightly less than the proposed Project and would be considered less than significant (**Class II**) with the implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), B-1b (No Activities will occur in Riparian Conservation Areas), B-2 (Restoration of Coast Live Oak Trees), and B-4 (Implement Weed Control Measures). Impacts from potential soil erosion from construction of the new access roads or tower sites are addressed in Section C.5.5 (Geology, Soils, and Paleontology) and would be minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Impacts from Alternative 2 would also result in the loss foraging habitat for common wildlife and raptors (Impact B-3). Construction and the use of helicopters, which would increase as a result of Mitigation Measure V-4a (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), may also result in the temporary degradation of the value of adjacent native habitat areas due to disturbance, noise, increased human presence, and increased vehicle traffic during construction. However, these tower locations are isolated and these impacts are expected to be localized and of short duration. Implementation of this Alternative would be similar to the proposed Project and impacts would be considered less than significant (**Class II**) with the implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), B-2 (Restoration of Coast Live Oak Trees), B-4 (Implement Weed Control Measures) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impacts on Endangered or Threatened Species, or Proposed or Critical Habitat (Criterion BIO2)

Plants

Alternative 2 is located in the same general area and habitat type as the proposed Project. Construction activities associated with Alternative 2 would result in the same potential impacts to listed plant species (Impact B-7) as the proposed Project. To reduce potential impacts to listed plant species, SCE would conduct pre-construction surveys for all listed plants with the potential to occur in project area (APM BIO-1). SCE would also implement APMs BIO-2, BIO-4, BIO-5, and BIO-6 which require the establishment and flagging of avoidance zones, conducting biological monitoring during construction, minimization dust and runoff, and biological training for all Project staff. Impacts to listed plant species (Impact B-7) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-7 (Conduct Surveys for Sensitive Plant Species).

Wildlife

Amphibians

Listed amphibians are not expected to occur on NFS lands affected by this Alternative. Alternative 2 would result in the same potential impacts as the proposed Project to arroyo toad (Impact B-8) and California red-legged frog (Impact B-9). These species are located in non-NFS lands and would not be affected by the placement of towers on downslope sections of the ANF. Impacts to arroyo toads and to breeding and upland habitat for this listed amphibian species (Impact B-8) would be considered less than significant (**Class II**) with the implementation of Mitigation Measures B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages). Impacts to California Red-legged frog (Impact B-9) would be considered less than significant (**Class II**) with the implementation of Mitigation Measure B-9 (Conduct Focused Surveys for California Red-legged Frog) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Fish

Impacts from Alternative 2 to listed fish would be the same as the proposed Project. As the proposed Project would not impact Bouquet Creek, impacts to Santa Ana sucker or unarmored threespine stickleback are not expected to occur. Construction of tower footings on mid-slope areas could result in the potential for erosion and sediment transport into Bouquet creek. Without mitigation sediment laden water entering the creek could result in impacts to listed fish species. However, SCE has indicated that implementation APM BIO-4 would require the application of BMPs to control sediment and erosion to control sedimentation and erosion near bodies of water and all drainages, (APM BIO-4) would avoid which would minimize impacts to these species. In addition, potential erosion from grading on the ridge line or access roads would be further minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Birds

Alternative 2 would result in the same type of impacts to foraging habitat for listed raptor species (Impact B-10), and riparian habitat for listed bird species (Impact B-11) as the proposed Project. The mid-slope Alternative would increase the total area of disturbance but would occur on steep terrain supporting chaparral plant communities. Temporary and permanent loss of native vegetation communities that provide foraging habitat for listed raptor species (Impact B-10) would be reduced to a less-than-significant level (**Class II**) through implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

On non-NFS lands impacts to Coastal sage scrub that could support coastal California gnatcatchers (Impact B-12) would also be the same as the proposed Project. Impacts to coastal California gnatcatchers (Impact B-12) if present would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-12 (Conduct Protocol Surveys for California Gnatcatchers). This mitigation measure is required in addition to APMs BIO-1, BIO-4, and BIO-5 to ensure that coastal California gnatcatchers and their habitat are not affected by the proposed Project.

Impacts to sensitive birds from electrocution would also be the same or less than the proposed Project (Impact B-13). It is possible that relocation of the transmission line to mid-slope locations could reduce potential impacts from birds utilizing thermal areas along the tops of ridgelines, including condors, and may also reduce potential

impacts from line collisions with migratory birds. Such impacts would be considered potentially adverse but less than significant (**Class III**). However, in order to further reduce potential impacts from electrocutions to raptors on NFS lands and to comply with the ANF Forest Plan standards, Mitigation Measure B-13 (Raptor Safety Protection on Tower/Conductor and Lines on NFS lands) would be implemented. Potential impacts from bird collisions (Impact B-14) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-13 (Raptor Protection) and B-14 (Utilize Collision-Reducing Techniques).

Impacts on Candidate, Sensitive, or Special-Status Species (Criterion BIO3)

Plants

Alternative 2 would result in the same potential impacts as the proposed Project to special-status plant species (Impact B-15). Potential impacts to these species would be reduced to less-than-significant (**Class II**) levels with the implementation of Mitigation Measure B-7 (Conduct Surveys for Special Status Plants).

Wildlife

Amphibians

Alternative 2 would result in the same general impacts to habitat for special-status amphibian species (B-16) as the proposed Project. Clearing and grading for the new tower locations and access roads would not occur in habitat utilized by special status amphibians on NFS lands. Implementation APM BIO-4 would require the application of BMPs to control sediment and erosion near bodies of water and all drainages, which would minimize impacts to these species if present. ~~In addition, SCE has indicated that implementation of BMPs to control sedimentation and erosion near bodies of water and all drainages (APM BIO-4) would avoid impacts to these species if present.~~ Temporary and permanent loss of native vegetation communities that provide habitat for special-status amphibian species in (Impact B-16) would be reduced to less- than-significant (**Class II**) levels through implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-16 (Conduct Pre-construction Surveys for Sensitive Amphibians and Reptiles).

Fish

Implementation of Alternative 2 would result in the same potential impacts to special-status fish species as the proposed Project. Impacts to arroyo chub and the Santa Ana speckled dace are the same as described for listed species. Potential erosion related would be minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Reptiles

Alternative 2 would result in the same general impacts to sensitive aquatic (Impact B-17) and terrestrial reptiles (Impact B-18) as the proposed Project. Impacts to aquatic habitat or individual special-status reptile species (Impact B-17 and Impact B-18) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), APM GEO-3 (Implementation of SWPPP), Mitigation Measure G-2 (Minimization of Soil Erosion), B-16 (Conduct Pre-construction Surveys for Sensitive Amphibians and Reptiles) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Birds

Alternative 2 would result in the same impacts to special status birds as the proposed Project. Under Alternative 2, the tower sites would be located downslope from the Del Sur Ridge in areas that could support nesting or breeding habitat for sensitive birds. However, this impact is largely the same as for the proposed Project and the implementation of mitigation measures and preconstruction surveys would avoid impacts to nesting birds on NFS lands. Impacts to species on private lands including burrowing owls (Impact B-19) would also be the same as the proposed Project since the Alternative 2 alignment would be located in the same corridor. Implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) and B-19 (~~Passively Relocate Individual Burrowing Owls During the Non-Breeding Season~~) would be required to reduce this impact to a less-than-significant level (**Class II**).

Implementation of Alternative 2 would have the same impacts to foraging habitat for special-status raptor species (Impact B-20) as identified in the proposed Project. Temporary and permanent loss of native vegetation communities that provide foraging habitat for special-status raptor species (Impact B-20) would be reduced to less than significant (**Class II**) through implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impacts of Alternative 2 to nesting habitat for special-status and migratory bird species (Impact B-21) are also the same as the proposed Project. Potential impacts to sensitive birds are the same as described for Impacts B-6 and B-10. Implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce Impact B-21 to less-than-significant (**Class II**) levels.

Impacts to sensitive birds from electrocution would also be the same or less than the proposed Project (Impact B-22). As described above for listed species it is possible that relocation of the transmission line to mid-slope locations could reduce potential impacts from line collisions with raptors and migratory birds. Such impacts would be considered potentially adverse but less than significant (**Class III**). However, in order to further reduce potential impacts from electrocutions to raptors on NFS lands and to comply with the ANF Forest Plan standards, Mitigation Measure B-13 (Raptor Safety Protection on Tower/Conductor and Lines on NFS lands) would be implemented. Potential impacts from bird collisions (Impact B-23) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-13 (Raptor Protection) and B-14 (Utilize Collision-Reducing Techniques).

Mammals

Alternative 2 would result in the same potential impacts as the proposed Project to special-status bat species (Impact B-24), American badger (Impact B-25), and special-status rodent species (Impact B-26). Habitat in this Alternative is similar to that of the proposed Project and Impact B-24 would be considered less-than-significant (**Class III**), while Impacts B-25 and B-26 would be considered less-than-significant (**Class II**) with the implementation of ~~Mitigation Measures B-24 (Passively Relocate Individual Bats)~~, B-25 (Passively Relocate American Badgers During the Non-breeding Season), and Mitigation Measure B-26 (Avoid Burrow Areas) (**Class II**).

Management Indicator Species

Impacts to each specific MIS are addressed below. However, as the line generally parallels the existing designated utility corridor, potential impacts to MIS from Alternative 2 would be similar to the proposed Project.

Healthy Diverse Habitats (Mule Deer). Alternative 2 would place the new transmission line towers in mid-slope positions east of the Del Sur Ridge line in habitat characterized as chaparral plant communities. Although mule deer do use chaparral communities, their preferred forage consists of mast from oak woodlands, riparian plants, and edge areas where herbaceous plants and grasses are dominant. Under Alternative 2 potential impacts to mule deer would be considered the same as the proposed Project. Noise from helicopter use, which would increase as a result of Mitigation Measure V-4a (Construct, Operate, and Maintain with Helicopters – see Section C.15, Visual Resources), would be disruptive and could result in animals moving away from the work sites. However, this use of helicopters would be isolated to each tower location and of short term duration. Potential impacts to mule deer and other terrestrial MIS (Impact B-27) would be considered less than significant (**Class III**).

Fragmentation (Mountain lion). Impacts to mountain lion from Alternative 2 would be the same as the proposed project. Although adverse, impacts to this species would be considered less-than-significant (**Class III**).

Montane Conifer Forest (California spotted owl, California black oak, and white fir). Impacts to this MIS would be similar to the proposed Project. Because the transmission line spans a number of small drainages it is possible that some foraging may occur in the vicinity of Alternative 2. Implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce impacts to spotted owl if present to less-than-significant (**Class II**) levels.

White fir and black oak are not present in the designated utility corridor for the Alternative 2. Impacts to these MIS would not occur.

Riparian Habitat (Song Sparrow). Impacts to this MIS guild would be similar to the proposed Project. The proposed underground section of transmission line located on NFS lands would not occur in habitat utilized by this bird assemblage. As identified under Impact B-11 the proposed Project would span drainages, avoid impacts to riparian vegetation, and travel would be restricted to existing roads in these sensitive areas. In addition, impacts to listed riparian bird species (Impact B-11) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds). On NFS lands Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), would be implemented to comply with the Forest Plan. This mitigation measure is required in addition to APMs BIO-1, BIO-4, and BIO-5 to ensure that this MIS is not impacted by the implementation of Alternative 2.

Aquatic Habitat (Arroyo toad). The arroyo toad is not expected to occur on the designated utility corridor on NFS lands. Impacts to this species would be the same as the proposed Project. Impacts to this species on non-NFS lands are described under Impact B-8 and if present would be mitigated to less-than-significant level (**Class II**) through implementation of Mitigation Measure B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Oak Regeneration (Blue oak, Engleman oak, and Valley oak). Blue oak, valley oak, and Englemans oaks were not identified in the proposed utility corridor and would not be impacted by Alternative 2. Oak woodlands occur in the valley bottoms and drainages at several locations along the designated utility corridor for the proposed Project on NFS lands and along portions of the ROW in Haskell Canyon on non-NFS lands, however, these three MIS were not found within these oak woodlands.

Bigcone Douglas-fir Forest (Bigcone Douglas-fir). These MIS are not present in the designated utility corridor for the Alternative 2 and would not be impacted by construction.

Coulter Pine Forest (Coulter pine). Coulter pine is a major component of lower montane forests which are not present in the designated utility corridor for Alternative 2. Impacts to this MIS would not occur.

Impacts to Jurisdictional Waters and Wetlands (Criterion BIO4)

Alternative 2 would result in the same impacts as the proposed Project to jurisdictional waters and wetlands (Impact B-28), and would be considered less than significant (Class III).

Impacts to Movement of Fish, Wildlife Movement Corridors, or Native Wildlife Nursery Sites (Criterion BIO5)

Alternative 2 would result in the same impacts to linkages and wildlife movement corridors as the proposed Project (Impact B-29). As described by the proposed Project, these impacts are less than significant (Class III), and no mitigation is required. Although helicopter usage may temporarily disrupt wildlife usage of the area it would not completely impede the movement of wildlife and would not affect the nocturnal movement of wildlife. Therefore, this impact would be less than significant with no mitigation recommended (Class III).

Conflict with Local Policies or Ordinances Protecting Biological Resources (Criterion BIO 6)

Alternative 2 would result in the same impacts to the Los Angeles County's oak tree ordinance (Impact B-30), the Forest Plan (Impact B-31), and the City of Santa Clarita's General Plan (Impact B-32) as the proposed Project. As described by the proposed Project, impacts would be less than significant (Class II) with the implementation of Mitigation Measure B-2 (Restoration of Coast Live Oak Trees) for Impact B-30. To comply with the Forest Plan, Alternative 2 would implement Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), thereby eliminating any potential for conflict with the Forest Plan (Class III). The implementation of Mitigation Measures B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds), B-8b (Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages) and B-26 (Avoid Burrow Areas) would reduce impacts to a less-than-significant level for Impact B-32.

Impacts to HCPs, NCCPs, or other approved local, regional, or state HCP (Criterion BIO7)

Alternative 2 would result in the same potential impacts as the proposed Project to the proposed West Mojave HCP. As SCE has committed to implementation of the raptor protection plan mentioned above, Impact B-33 would be less than significant with no mitigation required (Class III).

C.3.8 Alternative 3: Antelope-Pardee Single-Circuit 500-kV Towers between Haskell Canyon and Pardee Substation

Alternative 3 would be located in the same route as the proposed Project between Mile 0.0 to Mile 20.3, but would involve constructing an additional line of single-circuit towers between Haskell Canyon and the Pardee Substation (Mile 20.3 to Mile 25.6), rather than constructing double-circuit 500-kV towers and removing the existing single-circuit 500-kV towers. The single-circuit towers would be built in the vacant position (near the center of the ROW) of the existing Pardee-Vincent 500-kV ROW. Similar to the proposed Project, this alternative would include removal of approximately 119 existing 66-kV towers and would result in the

establishment of 0.7 miles of new ROW within the 12.9 miles of ROW that will traverse the ANF. On NFS lands Alternative 3 is the same as the proposed Project.

C.3.8.1 Affected Environment

C.3.8.1.1 Literature Review

Alternative 3 occurs within the same general vicinity as the proposed Project. Therefore, the same literature search that was conducted for the proposed Project was conducted for this alternative.

C.3.8.1.2 Survey Methodology

This alternative follows the same alignment as the proposed Project. Therefore, the results of the field surveys conducted for the proposed Project were reviewed, and no further field surveys were conducted.

C.3.8.1.3 Alternative 3 Existing Conditions

The same biological environment (vegetation communities, wildlife habitat, and sensitive species) is present along Alternative 3 as the proposed Project. The vegetation communities identified for Alternative 3 are the same as for the proposed Project and are shown on Figures C.3-1A, C.3-1B, and C.3-1C.

C.3.8.2 Impacts and Mitigation Measures

Impacts on Riparian or Sensitive Natural Communities (Criterion BIO1)

Construction of Alternative 3 would result in the same impacts to native vegetation communities (Impact B-1), oak trees (Impact B-2), and the loss of foraging habitat for common wildlife and raptors (Impact B-3) as the proposed Project. These impacts would be considered less than significant (**Class II**) with the implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-4 (Implement Weed Control Measures).

The introduction of invasive plants (Impact B-4) would also be the same as the proposed Project and would be considered less than significant (**Class II**) with the implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), B-1b (No Activities will occur in Riparian Conservation Areas) B-2 (Restoration of Coast Live Oak Trees), and B-4 (Implement Weed Control Measures). Alternative 3 would result in the same direct loss of small mammals, reptiles, and other less mobile species (Impact B-5) as the proposed project. Impacts from this activity would be considered adverse but less than significant (**Class III**).

As Alternative 3 has the exact same alignment on NFS lands as the proposed Project, impacts to riparian or sensitive natural communities would be same as the proposed Project. Implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce Impact B-6 to less-than-significant levels (**Class II**).

Impacts on Endangered or Threatened Species, or Proposed or Critical Habitat (Criterion BIO2)

Plants

Alternative 3 is located in the same area and habitat type as the proposed Project. Construction activities associated with this Alternative would result in the same potential impacts to listed plant species (Impact B-7) as

the proposed Project. To reduce potential impacts to listed plant species, SCE would conduct pre-construction surveys for all listed plants with the potential to occur in the proposed Project area (APM BIO-1). SCE would also implement APMs BIO-2, BIO-4, BIO-5, and BIO-6 which require the establishment and identification of avoidance zones, conducting biological monitoring during construction, minimization of dust and runoff, and biological training for all Project staff. Impacts to listed plant species (Impact B-7) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-7 (Conduct Surveys for Sensitive Plant Species).

Wildlife

Amphibians

Listed amphibians are not expected to occur on NFS lands affected by this Alternative. Alternative 3 would result in the same potential impacts to arroyo toads (Impact B-8) as the proposed Project and California red-legged frog (Impact B-9). These species are located in non-NFS lands and would not be affected by the construction of Alternative 3. Potential indirect impacts to amphibians or aquatic resources that may occur in the creek from increased erosion potential are not expected to result in adverse impacts. APM BIO-1 and Mitigation Measure B-16 would require the flagging and avoidance of bodies of water that could potentially support breeding pools for special-status amphibian species, in addition to which APM BIO-5 would require monitoring by a biologist to ensure that these restricted (flagged) areas are protected during construction-phase activities. Implementation of Mitigation Measure B-16 would also provide for the relocation of identified sensitive amphibian species that may be found within construction zones. The application of BMPs to control sedimentation and erosion near these bodies of water and all drainages, as required by APM BIO-4, would also minimize impacts to these species. Additionally, potential erosion from grading on the ridge line or access roads would be further minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

~~SCE has indicated that pre-construction surveys (APM BIO-1), flagging and avoidance of bodies of water that could potentially support breeding pools for special-status amphibian species (APM BIO-5), and implementation of BMPs to control sedimentation and erosion near these bodies of water and all drainages (APM BIO-4) would avoid direct impacts to these species. In addition, potential erosion from grading on the ridge line or access roads would be further minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).~~

Impacts to arroyo toads and to breeding and upland habitat for this listed amphibian species (Impact B-8) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measures B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Fish

Impacts from Alternative 3 on listed fish would be the same as the proposed Project. Since the proposed Project would not impact Bouquet Creek, impacts to Santa Ana sucker or unarmored threespine stickleback are not expected to occur. Potential erosion related concerns are addressed in Section C.5.5 (Geology, Soils, and Paleontology) and would be minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Birds

Alternative 3 would result in the same impacts to foraging habitat for listed raptor species (Impact B-10), and riparian habitat for listed bird species (Impact B-11) as the proposed Project. Temporary and permanent loss of native vegetation communities that provide foraging habitat for listed raptor species (Impact B-10) would be reduced to a less-than-significant level (**Class II**) through implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impacts to coastal sage scrub habitat that could support populations of coastal California gnatcatchers occur on non-NFS lands (Impact B-12) would also be the same as the proposed Project. Impacts to coastal California gnatcatchers (Impact B-12) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-12 (Conduct Protocol Surveys for California Gnatcatchers).

Impacts to sensitive birds from electrocution would also be the same as the proposed Project (Impact B-13). Such impacts would be considered potentially adverse but less than significant (**Class III**). However, in order to further reduce potential impacts from electrocutions to raptors on NFS lands and to comply with the ANF Forest Plan standards, Mitigation Measure B-13 (Raptor Safety Protection on Tower/Conductor and Lines on NFS lands) would be implemented. Potential impacts from bird collisions (Impact B-14) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-13 (Raptor Protection) and B-14 (Utilize Collision-Reducing Techniques).

Impacts on Candidate, Sensitive, or Special-Status Species (Criterion BIO3)

Plants

Alternative 3 would result in the same potential impacts as the proposed Project to special-status plant species (Impact B-15). These impacts would be considered less than significant (**Class II**) with the implementation of Mitigation Measure B-7 (Conduct Surveys for Special Status Plants).

Wildlife

Amphibians

Alternative 3 is located in the same alignment as the proposed Project and would result in the same general impacts to habitat for special-status amphibian species (B-16) as the proposed Project. Temporary and permanent loss of native vegetation communities that provide habitat for special-status amphibian species in would be reduced to a less-than-significant level (**Class II**) through implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-16 (Conduct Pre-construction Surveys for sensitive Amphibians and Reptiles).

Fish

Implementation of Alternative 3 would result in the same potential impacts to special-status fish species as the proposed Project. Impacts to arroyo chub and the Santa Ana speckled dace are the same as described for listed species. Potential erosion would be minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Reptiles

Alternative 3 would result in the same impacts to sensitive aquatic (Impact B-17) and terrestrial reptiles (Impact B-18) as the proposed Project. Impacts to aquatic habitat or individual special-status reptile species (Impact B-17 and B-18) would be reduced to a less-than-significant level (**Class II**) with the implementation of APM GEO-3 (Implementation of SWPPP), Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), G-2 (Minimization of Soil Erosion), B-16 (Conduct Pre-construction Surveys for Sensitive Amphibians and Reptiles), and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Birds

Alternative 3 is located in the same location as the proposed Project and would therefore result in the same impacts to sensitive birds as the proposed Project. Implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) and B-19 (~~Passively Relocate Individual Burrowing Owls During the Non-Breeding Season~~) would be required to reduce this impact to a less-than-significant level (**Class II**).

Implementation of Alternative 3 would have the same impacts to foraging and nesting habitat for special-status raptor species (Impact B-20) as identified in the proposed Project. Temporary and permanent loss of native vegetation communities that provide foraging habitat for special-status raptor species (Impact B-20) would be reduced to a less-than-significant level (**Class II**) through implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impacts to sensitive birds from electrocution or line collisions would be the same as the proposed Project (Impact B-22) and would be considered potentially adverse but less than significant (**Class III**). However, in order to further reduce potential impacts from electrocutions to raptors on NFS lands and to comply with the ANF Forest Plan standards, Mitigation Measure B-13 (Raptor Safety Protection on Tower/Conductor and Lines on NFS lands) would be implemented. Potential impacts from bird collisions (Impact B-23) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-13 (Raptor Protection) and B-14 (Utilize Collision-Reducing Techniques).

Mammals

Alternative 3 would result in the same impacts as the proposed Project to special-status mammal species. These impacts would be less than significant (Class III) and less than significant (Class II) with the implementation of ~~Mitigation Measures B-24 (Passively Relocate Individual Bats)~~, B-25 (Passively Relocate American Badgers During the Non-breeding Season), and B-26 (Avoid Burrow Areas).

Management Indicator Species

Management Indicator Species (MIS) would be subject to the same impacts as the proposed Project since the Alternative 3 alignment is the same as the proposed Project on NFS lands.

Healthy Diverse Habitats (Mule Deer). Impacts to mule deer would be the same as the proposed Project. Mule deer in the vicinity of this alignment may be disturbed or move out of the area as a result of the construction noise, but these impacts would be temporary and limited to the construction phase of the project. Although construction may result in temporary impacts to this species these impacts would be considered adverse but not significant (**Class III**).

Fragmentation (Mountain lion). Impacts to this MIS would be the same as the proposed Project. Although construction may result in temporary impacts to this species these impacts would be considered adverse but not significant (**Class III**).

Montane Conifer Forest (California spotted owl, California black oak, and white fir). Impacts to this MIS would be similar to the proposed Project. Because the transmission line spans a number of small drainages it is possible that some foraging may occur in the vicinity of Alternative 3. Implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce impacts to spotted owl if present to less-than-significant (**Class II**) levels.

White fir and black oak are not present in the designated utility corridor for the Alternative 3. Impacts to these MIS would not occur.

Riparian Habitat (Song Sparrow). Alternative 3 would result in the same impacts to this MIS as the proposed Project. As identified under the proposed Project impacts to this MIS would be avoided. On NFS lands Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), would be implemented to comply with the Forest Plan. This mitigation measure is required in addition to APMs BIO-1, BIO-4, and BIO-5 to ensure that this MIS is not impacted by Alternative 3.

Aquatic Habitat (Arroyo toad). The arroyo toad is not expected to occur on the designated utility corridor on NFS lands. Impacts to this species would be the same as the proposed Project. Impacts to this species on non-NFS lands are described under Impact B-8 and if present would be mitigated to less-than-significant level (**Class II**) through implementation of Mitigation Measure B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Oak Regeneration (Blue oak, Engleman oak, and Valley oak). Blue oak, valley oak, and Englemans oaks were not identified in the proposed utility corridor and would not be impacted by Alternative 3. Oak woodlands occur in the valley bottoms and drainages at several locations along the designated utility corridor for the proposed Project on NFS lands and along portions of the ROW in Haskell Canyon on non-NFS lands, however, these three MIS were not found within these oak woodlands.

Bigcone Douglas-fir Forest (Bigcone Douglas-fir). These MIS are not present in the designated utility corridor for the Alternative 3 and would not be impacted by construction.

Coulter Pine Forest (Coulter pine). Coulter pine is a major component of lower montane forests which are not present in the designated utility corridor for Alternative 3. Impacts to this MIS would not occur.

Impacts to Jurisdictional Waters and Wetlands (Criterion BIO4)

Alternative 3 would result in the same impacts as the proposed Project to jurisdictional waters and wetlands (Impact B-28). These impacts would be considered less than significant (**Class III**).

Impacts to Movement of Fish, Wildlife Movement Corridors, or Native Wildlife Nursery Sites (Criterion BIO5)

Alternative 3 would result in the same impacts to linkages and wildlife movement corridors as the proposed Project (Impact B-29). As the Alternative 3 corridor is located in the same location as the proposed Project, these impacts would be considered less than significant (**Class III**) and no mitigation is recommended.

Conflict with Local Policies or Ordinances Protecting Biological Resources (Criterion BIO 6)

Alternative 3 would result in the same impacts to the Los Angeles County's oak tree ordinance (Impact B-30), the Forest Plan (Impact B-31), and the City of Santa Clarita's General Plan (Impact B-32) as the proposed Project. As described by the proposed Project, impacts would be less than significant (**Class II**) with the implementation of Mitigation Measure B-2 (Restoration of Coast Live Oak Trees) for Impact B-30. To comply with the Forest Plan, Alternative 3 would implement Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), thereby eliminating any potential for conflict with the Forest Plan (**Class III**). The implementation of Mitigation Measures B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds), B-8b (Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages) and B-26 (Avoid Burrow Areas) would reduce impacts to less-than-significant for Impact B-32.

Impacts to HCPs, NCCPs, or other approved local, regional, or state HCP (Criterion BIO7)

Alternative 3 would result in the same potential impacts as the proposed Project to the proposed West Mojave HCP. As SCE has committed to implementation of the raptor protection plan mentioned above, Impact B-33 would be considered less-than-significant with no mitigation recommended (**Class III**).

C.3.9 Alternative 4: Antelope-Pardee Re-Routing of New Right-of-Way Along Haskell Canyon

Alternative 4 would follow the same route as the proposed Project from Mile 0.0 to Mile 17.5 and from Mile 20.3 to Mile 25.6. The ROW would require establishment of a new utility corridor, parallel to the proposed Project route, between Mile 17.5 and 20.3 in order to avoid the Veluzat Motion Picture Ranch and planned residential and community developments in the Santa Clarita area. Alternative 4 would follow the proposed Project route until approximately Mile 17.5. At this point, the transmission line would divert from the proposed Project route by continuing in a southerly direction as the proposed Project route shifts to the west-southwest. Traveling in a new ROW, Alternative 4 would continue southwest on NFS lands for about 0.5 mile, head due-south for another 0.8 mile before continuing south for another 0.7 mile outside the ANF. At this location the line would turn east for roughly 0.3 mile along the base of a hill. Just north of the City of Santa Clarita, the transmission line would turn to the south-southwest and continue for about 0.2 mile before re-entering the existing Pardee-Vincent 500-kV ROW. Alternative 4 would travel 0.6 mile within this existing ROW before rejoining the proposed Project route at approximately Mile 20.3. Alternative 4 would result in 1.3 miles of new ROW on NFS lands. Similar to the proposed Project, this alternative would include removal of approximately 119 existing 66-kV towers (cut flush with the ground surface) from the Saugus-Del Sur corridor.

C.3.9.1 Affected Environment

C.3.9.1.1 Literature Review

Alternative 4 occurs within the same general vicinity as the proposed Project. Therefore, the same literature search that was conducted for the proposed Project was conducted for this alternative.

C.3.9.1.2 Survey Methodology

Field surveys were concentrated on portions of the route that differed from the proposed Project, specifically between Mile 17.5 and 20.3. The same methodology and survey parameters were utilized as described in Section C.3.1.2 (Survey Methodology) for the proposed Project. The field survey was conducted between sunrise and 4:00 p.m. on February 8-9, 2006. Weather conditions during the survey consisted of clear skies, temperatures between 68 degrees Fahrenheit (°F) and 98 °F, and winds of 0-2 miles per hour (mph) with periodic gusts of up to 15 mph.

C.3.9.1.3 Alternative 4 Existing Conditions

The same biological environment (vegetation communities, wildlife habitat, sensitive species, etc.) is present along Alternative 4 as the proposed Project. This is described in Section C.3.1.3 (Proposed Project Existing Conditions) and as shown by Figures C.3-1A, C.3-1B, and C.3-1C (Vegetation Communities Maps). Vegetation communities along the proposed route for Alternative 4 include chamise chaparral (the majority of which has been burned within the past 5 years and is the process of recovering), non-native grassland, and drainages supporting coast live oaks. The vegetation communities identified for Alternative 4 are shown on Figures C.3-5A, C.3-5B.

C.3.9.2 Impacts and Mitigation Measures

Impacts on Riparian or Sensitive Natural Communities (Criterion BIO1)

Alternative 4 would result in the same temporary and permanent impacts to native vegetation communities (Impact B-1), oak trees (Impact B-2), foraging habitat for wildlife (Impact B-3), and introduction of invasive plants (Impact B-4) as the proposed Project. However, there would be a slight increase in the amount of new access roads required for this Alternative. On NFS lands this would require approximately 3.18 miles of spur roads compared to 1.7 for the proposed Project. However, as described for the proposed Project, these impacts would be considered less than significant (**Class II**) with the implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), B-1b (No Activities will occur in Riparian Conservation Areas), B-2 (Restoration of Coast Live Oak Trees) and B-4 (Implement Weed Control Measures), respectively.

Wildlife

Alternative 4 would result in the same potential impacts as the proposed Project to the disturbance of wildlife through construction activities and increased vehicular traffic (Impact B-5). These impacts would be considered less than significant with no mitigation recommended (**Class III**). Alternative 4 would also result in the same impacts as the proposed Project to breeding or nesting birds (Impact B-6). With the implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) this impact (B-6) would be reduced to a less-than-significant level (**Class II**).

Impacts on Endangered or Threatened Species, or Proposed or Critical Habitat (Criterion BIO2)

Vegetation

Alternative 4 would result in the same impacts to listed plant species (Impact B-7) as the proposed Project. Implementation of Mitigation Measure B-7 (Conduct Surveys for Sensitive Plant Species) would reduce impacts to less-than-significant levels (**Class II**).

Wildlife

Amphibians

Listed amphibians are not expected to occur on NFS lands affected by this Alternative. Alternative 4 would result in the same potential impacts as the proposed Project to arroyo toad (Impact B-8) and California red-legged frog (Impact B-9). These species are located in non-NFS lands and would not be affected by the construction of this Alternative. Impacts to arroyo toads and to breeding and upland habitat for this listed amphibian species (Impact B-8) would be reduced to a less-than-significant level on non-NFS lands (**Class II**) with the implementation of Mitigation Measures B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Fish

Impacts from Alternative 4 to listed fish would be the same as the proposed Project. As the proposed Project would not impact Bouquet Creek, impacts to Santa Ana sucker or unarmored threespine stickleback are not expected to occur. Potential erosion related concerns are addressed in Section C.5.5 (Geology, Soils, and Paleontology) and would be minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Birds

Alternative 4 would result in the same impacts to foraging habitat for listed raptor species (Impact B-10), and riparian habitat for listed bird species (Impact B-11) as the proposed Project. Temporary and permanent loss of native vegetation communities that provide foraging habitat for listed raptor species (Impact B-10) would be reduced to a less-than-significant level (**Class II**) through implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impacts to coastal sage scrub habitat that could support populations of coastal California gnatcatchers occur on non-NFS lands (Impact B-12) would also be the same as the proposed Project. Impacts to coastal California gnatcatchers (Impact B-12) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-12 (Conduct Protocol Surveys for California Gnatcatchers).

Impacts to sensitive birds from electrocution would also be the same as the proposed Project (Impact B-13). Such impacts would be considered potentially adverse but less than significant (**Class III**). However, in order to further reduce potential impacts from electrocutions to raptors on NFS lands and to comply with the ANF Forest Plan standards, Mitigation Measure B-13 (Raptor Safety Protection on Tower/Conductor and Lines on NFS lands) would be implemented. Potential impacts from bird collisions (Impact B-14) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-13 (Raptor Protection) and B-14 (Utilize Collision-Reducing Techniques).

Impacts on Candidate, Sensitive, or Special-Status Species (Criterion BIO3)

Vegetation

Alternative 4 would result in the same potential impacts as the proposed Project to special-status plant species (Impact B-15) as the proposed Project. These impacts would be less than significant (**Class II**) with the implementation of Mitigation Measure B-7 (Conduct Surveys for Special Status Plants).

Wildlife

More than thirty-six sensitive or special-status wildlife species were addressed in the literature review for Alternative 4. One special-status wildlife species, the San Gabriel Mountains slender salamander, was determined to be unlikely to occur in the project area because the proposed Project is located outside the known geographic range for this species.

Amphibians

Alternative 4 would result in the same impacts to habitat for special-status amphibian species (Impact B-16) as the proposed Project. These impacts would be considered less than significant (**Class II**) with the implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-16 (Conduct Pre-construction Surveys for sensitive Amphibians and Reptiles).

Fish

Implementation of Alternative 4 would result in the same potential impacts to special-status fish species as the proposed Project. Impacts to arroyo chub and the Santa Ana speckled dace are the same as described for listed species. Potential erosion related impacts from this Alternative would be minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Reptiles

Alternative 4 would result in the same impacts to sensitive aquatic (Impact B-17) and terrestrial reptiles (Impact B-18) as the proposed Project. Impacts to aquatic habitat or individual special-status reptile species (Impact B-17 and B-18) would be reduced to a less-than-significant level (**Class II**) with the implementation of APM GEO-3 (Implementation of SWPPP), Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), G-2 (Minimization of Soil Erosion), B-16 (Conduct Pre-construction Surveys for Sensitive Amphibians and Reptiles) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Birds

Alternative 4 is located in the same location as the proposed Project for the majority of the proposed alignment and would therefore result in the same impacts to sensitive birds as the proposed Project. Implementation of Mitigation Measure B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) and B-19 (~~Passively~~-Relocate Individual Burrowing Owls During the Non-Breeding Season) would be required to reduce this impact to a less than significant level (**Class II**).

Implementation of Alternative 4 would have the same impacts to foraging and nesting habitat for special-status raptor species (Impact B-20) as identified in the proposed Project. Temporary and permanent loss of native vegetation communities that provide foraging habitat for special-status raptor species (Impact B-20) would be reduced to a less-than-significant level (**Class II**) through implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impacts to sensitive birds from electrocution or line collisions would be the same as the proposed Project (Impact B-22) and would be considered potentially adverse but less than significant (**Class III**). However, in order to further reduce potential impacts from electrocutions to raptors on NFS lands and to comply with the ANF Forest Plan standards, Mitigation Measure B-13 (Raptor Safety Protection on Tower/Conductor and Lines

on NFS lands) would be implemented. Potential impacts from bird collisions (Impact B-23) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-13 (Raptor Protection) and B-14 (Utilize Collision-Reducing Techniques).

Mammals

Alternative 4 would result in the same impacts as the proposed Project to special-status mammal species. These impacts would be less than significant (Class III) and less than significant (**Class II**) with the implementation of ~~Mitigation Measures B-24 (Passively Relocate Individual Bats)~~, B-25 (Passively Relocate American Badgers During the Non-breeding Season), and B-26 (Avoid Burrow Areas).

Management Indicator Species

Management Indicator Species (MIS) would be subject to the same impacts as the proposed Project. With the exception of a 0.2 mile increase in the total transmission line route and approximately 3 miles of new roads the Alternative 4 alignment is the same as the proposed Project on NFS lands.

Healthy Diverse Habitats (Mule Deer)/ Fragmentation (Mountain lion). Impacts to mule deer and mountain lions would be the same as the proposed Project. Although construction may result in temporary disturbance to these species these impacts would be considered adverse but not significant (**Class III**).

Montane Conifer Forest (California spotted owl, California black oak, and white fir). Alternative 4 is located in the same corridor as the proposed Project and would not be located in conifer woodlands. Impacts to this MIS would be similar to the proposed Project. Because the transmission line spans a number of small drainages it is possible that some foraging may occur in the vicinity of Alternative 4. Implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce impacts to spotted owl if present to less-than-significant (**Class II**) levels.

White fir and black oak are not present in the designated utility corridor for the Alternative 2. Impacts to these MIS would not occur.

Riparian Habitat (Song Sparrow). Alternative 4 would result in the same impacts to this MIS as the proposed Project. As identified under the proposed Project impacts to this MIS would be avoided. On NFS lands Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), would be implemented to comply with the Forest Plan. This mitigation measure is required in addition to APMs BIO-1, BIO-4, and BIO-5 to ensure that this MIS is not impacted by Alternative 4.

Aquatic Habitat (Arroyo toad). The arroyo toad is not expected to occur on the designated utility corridor on NFS lands. Impacts to this species would be the same as the proposed Project. Impacts to this species on non-NFS lands are described under Impact B-8 and if present would be mitigated to less-than-significant level (**Class II**) through implementation of Mitigation Measure B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Oak Regeneration (Blue oak, Engleman oak, and Valley oak). Blue oak, valley oak, and Englemans oaks were not identified in the proposed utility corridor and would not be impacted by Alternative 4. Oak woodlands occur in the valley bottoms and drainages at several locations along the designated utility corridor for the proposed Project on NFS lands and along portions of the ROW in Haskell Canyon on non-NFS lands, however, these three MIS were not found within these oak woodlands.

Bigcone Douglas-fir Forest (Bigcone Douglas-fir). These MIS are not present in the designated utility corridor for the Alternative 4 and would not be impacted by construction.

Coulter Pine Forest (Coulter pine). Coulter pine is a major component of lower montane forests which are not present in the designated utility corridor for Alternative 4. Impacts to this MIS would not occur.

Impacts to Jurisdictional Waters and Wetlands (Criterion BIO4)

Alternative 4 would result in the same impacts as the proposed Project to jurisdictional waters and wetlands (Impact B-28), which would be less than significant with no mitigation recommended (Class III).

Impacts to Movement of Fish, Wildlife Movement Corridors, or Native Wildlife Nursery Sites (Criterion BIO5)

Alternative 4 would result in the same impacts to linkages and wildlife movement corridors (Impact B-29) as the proposed Project. Thus, this impact for Alternative 4 would be less than significant with no mitigation recommended (Class III).

Conflict with Local Policies or Ordinances Protecting Biological Resources (Criterion BIO 6)

Alternative 4 would result in the same impacts to the Los Angeles County's oak tree ordinance (Impact B-30), the Forest Plan (Impact B-31), and the City of Santa Clarita's General Plan (Impact B-32) as the proposed Project. As described by the proposed Project, impacts would be less than significant (Class II) with the implementation of Mitigation Measure B-2 (Restoration of Coast Live Oak Trees) for Impact B-30. To comply with the Forest Plan, Alternative 4 would implement Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), thereby eliminating any potential for conflict with the Forest Plan (Class III). The implementation of Mitigation Measures B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds), B-8b (Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages) and B-26 (Avoid Burrow Areas) would reduce impacts to a less-than-significant level for Impact B-32.

Impacts to HCPs, NCCPs, or other approved local, regional, or state HCP (Criterion BIO7)

Alternative 4 would result in the same potential impacts as the proposed Project to the proposed West Mojave HCP (Impact B-33). This impact would be considered less-than-significant with no mitigation required (Class III).

C.3.10 Alternative 5: Antelope-Pardee Sierra-Pelona Re-Route

Alternative 5 would require the construction of a 37.2-mile ROW to reduce potential impacts to NFS lands. Under this Alternative only 1.5 miles of transmission line would be constructed on NFS lands. This alternative would be constructed within 18.4 miles of existing utility corridor ROWs and would require the construction of approximately 18.8 miles of new ROW across the ANF, NFS lands, and on private lands. The ROW would head south from the Antelope Substation and cross the Portal Ridge Mountain range. The transmission line would continue south and would cross the western most portion of the Ritter Ranch Specific Plan area. After crossing the Sierra Highway, the transmission line would continue south, then turn west and then south again before turning east to cross the Antelope Valley Freeway. South of the Antelope Valley Freeway, the transmission line would turn west, heading towards the Pardee Substation in the existing Pardee-Vincent

corridor for about 18.4 miles, joining the proposed Project route for the final 5.3 miles. Similar to the proposed Project, this alternative would include improvements and/or expansion of the Antelope and Pardee Substations.

C.3.10.1 Affected Environment

C.3.10.1.1 Literature Review

Alternative 5 occurs within the same general vicinity as the proposed Project. Therefore, the same literature search that was conducted for the proposed Project was conducted for the majority of this alternative. Database searches of two additional 7.5-minute topographic quadrangles (Agua Dulce and Acton) were included in the literature review for Alternative 5. Because this alternative crosses BLM land, the list of California-BLM Animal Sensitive Species List, Updated April 2004 was reviewed and the status of potential species was updated to include BLM sensitive species. A literature search for BLM special-status plants was also conducted. BLM uses the term “special-status plants” to include: (1) federally listed and proposed species; (2) federal candidate species; (3) State-listed species; and (4) sensitive species. Sensitive species are those species that do not meet any of the first three criteria, but which are designated by the State Director for special management consideration. Plants on List 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere) of the CNPS Inventory that do not meet any of the first three criteria are considered sensitive by BLM in California and receive the same level of protection as federal candidate species. The literature review of BLM’s sensitive plants and wildlife did not result in the addition of any special-status plants or wildlife.

C.3.10.1.2 Survey Methodology

Alternative 5 required field surveys for the new alignment. The same methodology and survey parameters were utilized as described in Section C.3.1.2 (Survey Methodology) for the proposed Project. The field survey was conducted between sunrise and 4:00 p.m. on January 23-24, 2006. Weather conditions during the survey consisted of clear skies, temperatures between 50 degrees Fahrenheit (°F) and 66 °F, and winds of 0-2 miles per hour (mph) with periodic gusts of up to 15 mph.

C.3.10.1.3 Alternative 5 Existing Conditions

Vegetation Communities

The same vegetation communities described for the proposed Project occur along Alternative 5. However, more coastal sage scrub is present along this alternative than along the proposed Project. Chaparral is characteristic of steep slopes and upper portions of slopes that are north and east facing. Coastal sage scrub is more commonly found at the base of steep slopes on southwest-facing arid hillsides. Grasslands are associated with flat bottomlands and plateaus and previously disturbed areas. The Alternative 5 alignment consists of a mosaic of sage scrub, chaparral, and grassland that alternate based on topography and hillside aspect or co-exist as a mixed vegetation community. In addition to the vegetation communities that are described for the proposed Project, one additional community, California Juniper Series, occurs along this alignment. The vegetation communities for Alternative 5 are shown on Figures C.3-6A, C.3-6B, C.3-6C and C.3-6D and are discussed in greater detail below.

California Juniper Series. Several areas are characterized by Juniper scrub or Juniper chaparral. Juniper (*Juniperus* sp.) is intermixed with scrub and chaparral communities in several areas, the majority of which occur south of Bouquet Canyon Road. This series occurs in the southeast portion of the alignment beginning at Ritter Ranch and continues throughout the area along the Antelope Valley Freeway. Many boulders and rock outcrops occur in this area.

Sensitive Vegetation Communities

The literature search resulted in the same sensitive vegetation communities as the proposed Project and as listed in Section C.3.1.3.2 (Sensitive Vegetation Communities). The field surveys determined that three sensitive vegetation communities (Riversidean Alluvial Fan Sage Scrub, Southern Cottonwood Willow Riparian, and Southern Riparian Scrub) and one sensitive habitat (Southern California Threespine Stickleback Stream) occur within the survey area of Alternative 5. The vegetation communities/habitats that were surveyed along Alternative 5 are listed in Table C.3-5.

Sensitive Vegetation Community/Habitats	Occurs in Survey Area	Location Description and Approximate MP (if found in survey area)
California Walnut Woodland	No	
Mainland Cherry Forest	No	
Riversidean Alluvial Fan Sage Scrub	Yes	San Francisquito Creek, upstream of ROW, Mile 35.5
Southern California Threespine Stickleback Stream	Yes	San Francisquito Creek, Mile 35.5
Southern Coast Live Oak Riparian Forest	No	
Southern Cottonwood Willow Riparian	Yes	Haskell Canyon, Mile 32 San Francisquito Creek, Mile 35.5
Southern Riparian Scrub	Yes	Haskell Canyon, Bouquet Creek, Agua Dulce Creek
Southern Sycamore Alder Riparian Woodland	No	
Southern Willow Scrub	No	
Valley Needlegrass Grassland	No	
Valley Oak Woodland	No	
Wildflower Field	No	

Source: CNDDDB and CNPS database search of Lake Hughes, Del Sur, Warm Springs Mountain, Green Valley, Sleepy Valley, Newhall, Mint Canyon, Agua Dulce, and Acton 7.5 minute quads, 2006.

Sensitive Plants Species

The same listed and special-status plant species described by Section C.3.1.3.3 that have the potential to occur in the proposed Project area have the potential to occur along Alternative 5. With the exception of spreading navarretia and those species that occur within juniper woodland habitat, the potential for occurrence of sensitive plant species is the same as the proposed Project. Spreading navarretia, which has a low potential to occur along the proposed Project alignment, is known to occur at Cruzan Mesa (CNDDDB 2005), a grassland plateau that is located just south of the existing Pardee-Vincent 500-kV ROW. Alternative 5 would travel within a portion of this ROW. Sensitive plants that are associated with juniper vegetation communities and have the potential to occur along Alternative include:

- Pygmy poppy
- Mt. Gleason Indian paintbrush
- White-bracted spineflower
- Short-joint beavertail
- Rock Creek broomrape
- Mason’s neststraw
- Pine-green gentian

In addition, the CNDDDB literature search identified two special-status plant species, Greata’s aster (*Aster greatae*) and Mason’s bedstraw (*Stylocline masonii*), that were not previously addressed by the proposed Project. Table C.3-2 contains a list of special-status species that are known to occur within the vicinity of the proposed Project and Alternative 5. Table C.3-6 contains a list of the additional special-status species that could occur along the Alternative 5 alignment.

Scientific Name	Common Name	Status	Potential for Occurrence	Blooming Period	Habitat and Elevational Limits
<i>Aster greatae</i>	Greata's aster	1B	High	Jun-Oct	broad-leaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland; 300-2010m
<i>Stylocline masonii</i>	Mason's neststraw	1B	Moderate	Mar-May	chenopod scrub, pinyon and juniper woodland; 100-1200m

Sensitive Wildlife

According to the literature search, the same special-status wildlife species that have the potential to occur along the proposed Project route could also occur along Alternative 5 (Section C.3.1.3.4). The southern portion of the alternative would be located within 1.5 to 4.0 miles of the Santa Clara River, and would cross four major watersheds including the Agua Dulce, Bouquet, Haskell, and San Francisquito. Several aquatic or riparian special-status wildlife species are known to occur in or adjacent to the Santa Clara River including arroyo chub, Santa Ana sucker, unarmored threespine stickleback, arroyo toad, and southwestern willow flycatcher. Wildlife species with the potential to occur within the Bouquet, Haskell, and San Francisquito watersheds were addressed by the proposed Project in Section C.3.1.3.4. Two of these species, arroyo chub and unarmored threespine stickleback, are known to occur in Agua Dulce Creek (CNDDDB 2005). The remainder of these species have a high potential to occur in Agua Dulce Creek or its associated riparian habitat. The western spadefoot toad is known to occur adjacent to the Santa Clara River and at Cruzan Mesa, a grassland plateau that is located just south of the existing Pardee-Vincent 500-kV ROW, a portion of which would be traversed by Alternative 5. Due to the close proximity of known occurrences, the western spadefoot toad has a high potential to be found in upland habitat where ponding may occur. White-eared pocket mouse is unlikely to occur along the proposed route, and has a low potential to occur along Alternative 5 due to the presence of Juniper scrub habitat. Alternative 5 also crosses land under the jurisdiction of the BLM. Fourteen of the special-status wildlife species are considered sensitive by BLM. BLM Sensitive Animal Species that have potential to occur in the vicinity of the Alternative 5 include the following:

- Yellow-blotched salamander
- Western spadefoot
- Foothill yellow-legged frog
- Southwestern pond turtle
- Coast horned lizard (frontale)
- Rosy boa
- Two-striped garter snake
- Golden eagle
- Ferruginous hawk
- Burrowing owl
- California spotted owl
- Pallid bat
- Townsend's big-eared bat
- Spotted bat

Wildlife Corridors and Special Linkages

San Francisquito Canyon, Bouquet Canyon, and Agua Dulce Canyon likely serve as wildlife movement corridors. All three corridors connect the northern portion of the ANF to the Santa Clara River system, which eventually leads to the southern portion of the ANF or coastal mountain ranges and open space. However, portions of these corridors are constricted and channelized with concrete and box culverts in downstream urban areas, thereby limiting the types of wildlife that may utilize these portions of the canyons.

Jurisdictional Waters

Several creeks or waterways are located throughout the proposed alignment. Several jurisdictional drainages also occur throughout the steep terrain along the proposed alignment. Some of the larger streams or creeks that are located within and adjacent to the Alternative 5 include Agua Dulce Creek, Bouquet Canyon Creek, Haskell Canyon Creek, and San Francisquito Canyon Creek.

C.3.10.2 Impacts and Mitigation Measures

Impacts on Riparian or Sensitive Natural Communities (Criterion BIO1)

Construction of Alternative 5 would result in a net increase to impacts to native vegetation communities (Impact B-1) compared to the proposed Project. Ground-disturbing activities (i.e., tower pad preparation and construction, grading of new access and spur roads) would impact non-native grasslands, disturbed habitat, coastal sage scrub, and chaparral communities. Under Alternative 5 this impact would be greater than the proposed Project as approximately 24 additional acres of land would be temporarily disturbed. On NFS lands total impacts to habitat would be greatly reduced when compared to the proposed Project. For example, implementation of Alternative 5 would result in a total land disturbance from all project activities of approximately 10 acres on NFS lands compared to approximately 44 acres for the proposed Project. In addition, on NFS lands only 2.6 acres would be permanently impacted from tower and road (spur and access) construction.

Riparian habitat on non-NFS lands would also be permanently removed by Alternative 5 if access and spur roads are required in areas where this habitat occurs. The permanent loss or temporary disturbance of native vegetation communities would be significant but mitigable (**Class II**). Implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) would reduce impacts to a less-than-significant level.

Alternative 5 would be similar to the proposed Project and may also potentially result in temporary damage to oak trees (Impact B-2). Any disturbance to individual oak trees is considered a significant but mitigable impact under the Los Angeles County oak tree ordinance (**Class II**). Implementation of Mitigation Measure B-2 (Restoration of Coast Live Oak Trees) would reduce this impact to a less-than-significant level.

Alternative 5 would also result in a loss of foraging habitat for wildlife (Impact B-3). Installation of new tower locations would result in the permanent removal of native and non-native vegetation communities including chaparral, coastal sage scrub, and non-native grassland. Temporary and permanent loss of native vegetation communities that provide foraging habitat for raptor species would create a significant but mitigable impact (**Class II**). Implementation of Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) would reduce impacts to a less-than-significant level.

Alternative 5 would also increase the potential for the introduction of non-native and invasive plant species (Impact B-4). Several invasive species are located in the vicinity of the Alternative 5, including yellow star thistle, Spanish broom, and Russian thistle. Non-native or noxious weeds would be introduced through the use of vehicles, construction equipment, or the use of straw bales or wattles that contain seeds of non-native plant species. The introduction of non-native plant species would be considered a potentially significant impact (**Class II**), which could be reduced to a less-than-significant level through implementation of the following mitigation measures: Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-4 (Implement Weed Control Measures).

Construction of Alternative 5 would result in similar impacts to wildlife species (Impact B-5). Except where undeveloped wildlife habitats are known to support rare, threatened, or endangered species, or nesting birds, impacts on wildlife from construction would generate potentially adverse, but less-than-significant impacts (**Class III**).

Construction of Alternative 5 would result in the same impacts to nesting birds as the proposed Project (Impact B-6). Implementation of Mitigation Measures B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce impacts to less-than-significant levels (**Class II**).

Impacts on Endangered or Threatened Species, or Proposed or Critical Habitat (Criterion BIO2)

Vegetation

Alternative 5 would result in the same impacts to listed plant species (Impact B-7) as the proposed Project. Braunton's milk-vetch, Nevin's barberry, thread-leaved brodiaea, and San Fernando Valley spineflower have the potential to occur on portions of non-NFS lands on Alternative 5. Implementation of Mitigation Measure B-7 (Conduct Surveys for Sensitive Plant Species) would reduce potential impacts to a less-than-significant level (**Class II**).

Wildlife

Amphibians

Listed amphibians are not expected to occur on NFS lands affected by this Alternative. Alternative 5 would result in the same potential impacts as the proposed Project to arroyo toad (Impact B-8) and California red-legged frog (Impact B-9). These species are located in non-NFS lands and would not be affected by the construction of this Alternative. The arroyo toad is known to occur in Agua Dulce Canyon and in the San Francisquito Creek near the confluence with the Santa Clara River. The California red-legged frog is known to occur in non-NFS lands in Amargosa Creek in the Leona Valley. Alternative 5 would cross Amargosa and there is a high potential for this species to occur in or adjacent to the alternative ROW. Impacts to arroyo toads and to breeding and upland habitat for this listed amphibian species (Impact B-8) would be reduced to a less-than-significant level on non-NFS lands (**Class II**) with the implementation of Mitigation Measures B-8a (Conduct Focused Surveys for Arroyo Toad) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Potential indirect impacts to amphibians or aquatic resources that may occur in the creek from increased erosion potential are not expected to result in adverse impacts. APM BIO-1 and Mitigation Measure B-16, below, would require the flagging and avoidance of bodies of water that could potentially support breeding pools for special-status amphibian species, in addition to which APM BIO-5 would require monitoring by a biologist to ensure that these restricted (flagged) areas are protected during construction-phase activities. Implementation of Mitigation Measure B-16 would also provide for the relocation of identified sensitive amphibian species that may be found within construction zones. The application of BMPs to control sedimentation and erosion near these bodies of water and all drainages, as required by APM BIO-4, would also avoid direct impacts to these species. Additionally, potential erosion from grading on the ridge line or access roads would be further minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

SCE has indicated that pre-construction surveys (APM BIO-1), flagging and avoidance of bodies of water that could potentially support breeding pools for special status amphibian species (APM BIO-5), and implementation of BMPs to control sedimentation and erosion near these bodies of water and all drainages (APM BIO-4) would avoid direct impacts to these species. In addition, potential erosion from grading on the ridge line or access roads would be further minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Fish

Impacts from Alternative 5 to listed fish would be the same as the proposed Project. As the proposed Project would not impact Bouquet Creek, impacts to Santa Ana sucker or unarmored threespine stickleback are not expected to occur. Potential erosion related concerns are addressed in Section C.5.5 (Geology, Soils, and Paleontology) and would be minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Birds

Alternative 5 would result in the same impacts to foraging habitat for listed raptor species (Impact B-10), and riparian habitat for listed bird species (Impact B-11) as the proposed Project. However, several additional song birds may occur along this Alternative including western yellow-billed cuckoo, southwest willow flycatcher, and least Bell's vireo. Construction activities including noise, vehicle traffic, and human presence could disturb nesting birds if these activities are conducted during the breeding season. Temporary and permanent loss of native vegetation communities that provide foraging habitat for listed raptor species (Impact B-10) would be reduced to a less-than-significant level (**Class II**) through implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impacts to coastal sage scrub habitat that could support populations of coastal California gnatcatchers occur on non-NFS lands (Impact B-12) would also be the same as the proposed Project. Impacts to coastal California gnatcatchers (Impact B-12) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-12 (Conduct Protocol Surveys for California Gnatcatchers).

Impacts to sensitive birds from electrocution would also be the same as the proposed Project (Impact B-13). However, there would be a potential reduction in possible impacts to condors on Alternative 5 as the line would occur in areas subject to higher levels of disturbance or human presence. In addition, this alternative would include the removal of 119 existing 66-kV towers (same as proposed Project) from the Saugus-Del Sur utility corridor in the ANF, but unlike the proposed Project, these towers would not be replaced within the ANF. The net loss of transmission towers within the ANF may result in a beneficial (**Class IV**) impact to the California condor, if present, as they appear to be the most susceptible raptor to transmission line collisions in the ANF.

Overall impacts to raptors would be considered potentially adverse but less than significant (**Class III**). However, in order to further reduce potential impacts from electrocutions to raptors on NFS lands and to comply with the ANF Forest Plan standards, Mitigation Measure B-13 (Raptor Safety Protection on Tower/Conductor and Lines on NFS lands) would be implemented. Potential impacts from bird collisions (Impact B-14) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-13 (Raptor Protection) and B-14 (Utilize Collision-Reducing Techniques).

Impacts on Candidate, Sensitive, or Special-status Species (Criterion BIO3)

Vegetation

Alternative 5 would result in the same type of potential impacts to special-status plant species (Impact B-15) as the proposed Project. Ground-disturbing activity, including tower pad preparation and construction and grading of new access roads, has the potential to disturb listed plant species, including Greata's aster and Mason's bedstraw. These impacts would be less than significant (**Class II**) with the implementation of Mitigation Measure B-7 (Conduct Surveys for Special Status Plants).

Wildlife

Amphibians

Alternative 5 would result in the same impacts to habitat for special-status amphibian species (Impact B-16) as the proposed Project. Two sensitive species of amphibians, yellow-blotched salamander and the western spadefoot toad, have the potential to occur in the vicinity of Alternative 5. Construction activities would have the potential to adversely impact western spadefoot toad as a result of vegetation removal for staging areas and vehicle traffic. In addition, the removal of habitat and construction of the towers and laydown areas may result in the direct mortality of these species through mechanical crushing or habitat degradation. These impacts would be considered less than significant (**Class II**) with the implementation of Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-16 (Conduct Pre-construction Surveys for sensitive Amphibians and Reptiles).

Fish

Implementation of Alternative 5 would result in the same potential impacts to special-status fish species as the proposed Project. Impacts to arroyo chub and the Santa Ana speckled dace are the same as described for listed species. Potential erosion would be minimized through the implementation of APM GEO-3 (Implementation of SWPPP) and Mitigation Measure G-2 (Minimization of Soil Erosion).

Reptiles

Alternative 5 would result in the same impacts to sensitive aquatic (Impact B-17) and terrestrial reptiles (Impact B-18) as the proposed Project. Impacts to aquatic habitat or individual special-status reptile species (Impact B-17 and B-18) would be reduced to a less-than-significant level (**Class II**) with the implementation of APM GEO-3 (Implementation of SWPPP), Mitigation Measure B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities), G-2 (Minimization of Soil Erosion), B-16 (Conduct Pre-construction Surveys for Sensitive Amphibians and Reptiles) and B-8b (Implement Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages).

Birds

Alternative 5 would result in the same type of impacts as the proposed Project to foraging habitat of special-status raptor species (Impact B-20). Ten special-status raptor species have the potential to occur in the proposed Project area, including golden eagle, sharp-shinned hawk, merlin, northern goshawk, Cooper's hawk, northern harrier, white-tailed kite, spotted owl, burrowing owl, and prairie falcon. Construction activities would potentially impact foraging habitat for these special-status raptor species. Temporary and permanent loss of native vegetation communities that provide foraging habitat for special-status raptor species would be a significant but mitigable impact (**Class II**). Implementation of Mitigation Measures B-1a (Provide

Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds) would reduce impacts to a less-than-significant level.

Four special-status raptor species Cooper's hawk, northern harrier, white-tailed kite, and golden eagle have the potential to nest within the Alternative 5 alignment. The northern goshawk and prairie falcon likely forage within the vicinity of the alternative, but are unlikely to nest within or immediately adjacent to the ROW. Winter migrant sharp-shinned hawks and merlins have a moderate potential to occur within the alternative area. Because golden eagles, northern goshawks, prairie falcons, sharp-shinned hawks, and merlins are not likely to nest on site, and because these species are highly mobile, construction activities are not expected to directly impact these raptor species. Three special-status songbird species yellow warbler, yellow-breasted chat, and California horned lark have the potential to nest within or immediately adjacent to the alternative ROW. For each of these species, the removal of habitat during the breeding season would likely result in the displacement of breeding birds and the abandonment of active nests. Impacts would be potentially significant (**Class II**), but would be reduced to less-than-significant levels through implementation Mitigation Measures B-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) and B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds).

Impacts to sensitive birds from electrocution or line collisions would be the same as the proposed Project (Impact B-22) and would be considered potentially adverse but less than significant (**Class III**). However, in order to further reduce potential impacts from electrocutions to raptors on NFS lands and to comply with the ANF Forest Plan standards, Mitigation Measure B-13 (Raptor Safety Protection on Tower/Conductor and Lines on NFS lands) would be implemented. Potential impacts from bird collisions (Impact B-23) would be reduced to a less-than-significant level (**Class II**) with the implementation of Mitigation Measure B-13 (Raptor Protection) and B-14 (Utilize Collision-Reducing Techniques).

Mammals

Alternative 5 would result in the same impacts as the proposed Project to special-status mammal species. Alternative 5 would result in the loss of special-status bat species (Impact B-24). Numerous sensitive bat species have the potential to occur near Alternative 5, which include the pallid bat, spotted bat, Townsend's big-eared bat, and western red bat. Construction activities may have an impact on these sensitive bat species if present in areas where that towers are located adjacent to rocky hillsides. The American badger also has a moderate potential to occur in the chaparral and scrub habitats in the vicinity of the Alternative 5. Although no badger dens were noted within the alternative ROW, this species is likely to occur. Several sensitive rodent species have the potential to occur in sections of the Alternative 5 ROW including the Los Angeles pocket mouse, southern grass hopper mouse, and the Tehachapi pocket mouse. Permanent loss of habitat for these special-status rodent species would occur from the placement of tower footings.

Impacts to mammals for Alternative 5 would be considered less than significant (Class III) and less than significant (Class II) with the implementation of ~~Mitigation Measures B-24 (Passively Relocate Individual Bats)~~, B-25 (Passively Relocate American Badgers During the Non-breeding Season), and B-26 (Avoid Burrow Areas) would be required to reduce impacts to less-than-significant levels (**Class II**).

Management Indicator Species

Alternative 5 would be located almost entirely on non-NFS lands and overall impacts to MIS would be greatly reduced. In addition, although short term impacts to MIS would occur during the removal of the existing 66 kV transmission line this Alternative would result in a net benefit to MIS overtime and would be considered a

beneficial impact (**Class IV**). MIS are only evaluated on NFS lands and include a variety of both sensitive and common plants and wildlife. Potential impacts to individual species that are considered sensitive or rare on non-NFS lands have been fully addressed in the previous section.

Healthy Diverse Habitats (Mule Deer)/ Fragmentation (Mountain lion). Impacts to mule deer and mountain lions would be reduced as the project would occur on only a 1.5 mile portion of NFS lands. Although construction may result in temporary disturbance to these species on NFS lands Alternative 5 would be considered to result in an overall net benefit to this MIS (**Class IV**).

Montane Conifer Forest (California spotted owl, California black oak, and white fir). Potential impacts to this species would be less than the proposed Project. Alternative 5 is located in habitat that does not support populations of spotted owls, although this species may still forage in areas adjacent to the line on NFS lands. However, the removal of 119 existing 66-kV from the Saugus-Del Sur utility corridor would likely result in long term beneficial impacts to this MIS (**Class IV**).

White fir and black oak are not present in the designated utility corridor for Alternative 5. Impacts to these MIS would not occur.

Riparian Habitat (Song Sparrow). Alternative 5 would avoid habitat on NFS lands that support this MIS.

Aquatic Habitat (Arroyo toad). Impacts to this MIS would be the same as the proposed Project. The arroyo toad is not expected to occur on the Alternative 5 corridor on NFS lands.

Oak Regeneration (Blue oak, Engleman oak, and Valley oak). Blue oak, valley oak, and Englemans oaks were not identified in the proposed utility corridor and would not be impacted by Alternative 5. No impacts to this assemblage are expected to occur on NFS lands.

Bigcone Douglas-fir Forest (Bigcone Douglas-fir)/Coulter Pine Forest (Coulter pine). These MIS communities are not present in the Alternative 5 corridor. Impacts to this group of MIS would not occur.

Impacts to Jurisdictional Waters and Wetlands (Criterion BIO4)

Alternative 5 would result in the potential for greater impacts to jurisdictional water or wetlands when compared to the proposed Project. Although construction crews would avoid impacting the streambeds and banks of any streams along the route to the extent feasible (e.g., Bouquet Creek and Agua Dulce Canyon)(APM BIO-3), the construction of new access and spur roads and the installation or replacement of culverts in and adjacent to creeks and drainages could result in an alteration of the streambed, discharge of fill into drainages under the jurisdiction of the USACE, increased sedimentation in the drainages either directly deposited or through runoff, and/or the obstruction of water flow on non-NFS lands. Alteration of jurisdictional waters in turn could result in adverse impacts to plant and wildlife species that are dependent on these areas. If impacts to State or federal water waters would occur, SCE would comply with the requirements of a Streambed Alteration Agreement and the Clean Water Act. Impacts to jurisdictional waters and wetlands (Impact B-28) would be adverse, but less than significant (**Class III**). No mitigation is recommended.

Impacts to Movement of Fish, Wildlife Movement Corridors, or Native Wildlife Nursery Sites (Criterion BIO5)

Alternative 5 would result in the same impacts to linkages and wildlife movement corridors (Impact B-29) as the proposed Project. San Francisquito Canyon, Haskell Canyon, and Bouquet Canyon, and Agua Dulce Canyon serve as wildlife movement corridors that connect the northern portion of the ANF to the Santa Clara River

system, which eventually leads to the southern portion of the ANF or coastal mountain ranges and open space. Although construction of the alternative would result in a temporary disturbance to ridgelines and open space, the overall movement of wildlife would not be completely impeded. Thus, this impact for Alternative 5 would be less than significant with no mitigation recommended (**Class III**).

Conflict with Local Policies or Ordinances Protecting Biological Resources (Criterion BIO 6)

Alternative 2 would result in the same impacts to the Los Angeles County's oak tree ordinance (Impact B-30), the Forest Plan (Impact B-31), and the City of Santa Clarita's General Plan (Impact B-32) as the proposed Project. As described by the proposed Project, impacts would be less than significant (**Class II**) with the implementation of Mitigation Measure B-2 (Restoration of Coast Live Oak Trees) for Impact B-30. To comply with the Forest Plan, Alternative 4 would implement Mitigation Measure B-1b (No Activities will occur in Riparian Conservation Areas), thereby eliminating any potential for conflict with the Forest Plan (**Class III**). The implementation of Mitigation Measures B-6 (Conduct Pre-construction Surveys and Monitoring for Breeding Birds), B-8b (Seasonal Restrictions for Road Maintenance, Culvert Replacement, and Grading of New Access and Spur Roads That Occur Within Drainages) and B-26 (Avoid Burrow Areas) would reduce impacts to less-than-significant for Impact B-32.

Impacts to HCP's, NCCP's, or other approved local, regional, or State HCP (Criterion BIO7)

Alternative 5 would not conflict with the proposed West Mojave Habitat Conservation Plan (Impact B-33). Construction guidelines for construction of utility lines are included as part of the proposed West Mojave HCP in order to minimize impacts to raptor species. These guidelines require utility design of transmission lines to comply with *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996* (APLIC 1996). Failure to incorporate raptor protection measures would be in conflict with the Draft West Mojave HCP and would be significant if this document is finalized during the life of the project. As SCE has committed to implementation of the raptor protection plan mentioned above, impacts would be less than significant with no mitigation recommended (**Class III**).

C.3.11 No Project/Action Alternative

Under the No Project/Action Alternative, the Project would not be implemented and, therefore, the impacts associated with the proposed Project and alternatives described in Sections C.3.5 through C.3.11 would not occur. As a result, the No Project/Action Alternative would result in no new construction or operating activities. Periodic maintenance activities consisting primarily of road maintenance, brush clearing around the base of towers and facilities, and emergency repairs, would be necessary to maintain the existing transmission line if the 500-kV transmission line project is not constructed. However, new impacts to riparian or sensitive natural communities would not occur. Since critical habitat is not located in or immediately adjacent to the existing ROW, maintenance activities would not impact critical habitat. Therefore, the No Project/Action Alternative would contribute no impacts to candidate, sensitive, or special-status plant and animal species. In the Leona Valley (on non-NFS lands), maintenance or travel to the site adjacent to Amargosa Creek could result in periodic impacts to red-legged frogs that are known to occur in the area. Given that maintenance of the existing line is a part of the baseline conditions of the ROW, no new impacts would occur to fish, wildlife movement corridors, and native wildlife nursery sites. The No Project/Action Alternative would also avoid conflicts with local policies or ordinances protecting biological resources.

As identified in Section B.4.8.2, in the absence of the proposed Project, other actions would occur. Some wind projects would be postponed or cancelled, or alternatives would be developed that would meet the RPS goal by 2010. SCE would need to accommodate the power load by upgrading existing transmission infrastructure or building new transmission facilities along a different alignment. Construction methods, resulting impacts, and regulatory requirements associated with other transmission projects would be similar to those identified for the Project, so the potential impact would be expected to be similar to that identified for the proposed Project (Class II, significant but reduced to less than significant with the application of mitigation measures).

C.3.12 Impact and Mitigation Summary

Table C.3-7 presents a summary of the impacts and proposed mitigation measures for biological resources. For Class III impact, mitigation measures have been applied on NFS lands to further reduce potential impacts to biological resources from the proposed Project or alternatives.

Impact	Impact Significance					
	Proposed Project	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
B-1: The Project would cause temporary or permanent loss of native vegetation communities.	Class II	Class II	Class II	Class II	Class II	Class II
	B-1a, B-1b, R-4	B-1a, B-1b, B-1c, R-4	B-1a, B-1b, R-4	B-1a, B-1b, R-4	B-1a, B-1b, R-4	B-1a, B-1b, R-4
B-2: The Project would cause temporary damage or permanent loss of oak trees.	Class II	Class II	Class II	Class II	Class II	Class II
	B-2	B-2	B-2	B-2	B-2	B-2
B-3: The Project would cause loss of foraging habitat for wildlife.	Class II	Class II	Class II	Class II	Class II	Class II
	B-1a	B-1a	B-1a	B-1a	B-1a	B-1a
B-4: The Project would introduce non-native and invasive plant species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-1a, B-4, R-4	B-1a, B-4, R-4	B-1a, B-4, R-4	B-1a, B-4, R-4	B-1a, B-4, R-4	B-1a, B-4, R-4
B-5: Construction activities and increased vehicular traffic on access roads would disturb wildlife species.	Class III	Class III	Class III	Class III	Class III	Class III
	None	None	None	None	None	None
B-6: Construction activities during the breeding season would result in a potential loss of nesting birds.	Class II	Class II	Class II	Class II	Class II	Class II
	B-6	B-6	B-6	B-6	B-6	B-6
B-7: The proposed Project would result in the loss of listed plant species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-7	B-7	B-7	B-7	B-7	B-7
B-8: Construction activities would result in loss of arroyo toads.	Class II	Class II	Class II	Class II	Class II	Class II
	B-8a, B-8b	B-8a, B-8b	B-8a, B-8b	B-8a, B-8b	B-8a, B-8b	B-8a, B-8b
B-9: Construction activities would result in the loss of California red-legged frogs.	Class II	Class II	Class II	Class II	Class II	Class II
	B-8b, B-9	B-8b, B-9	B-8b, B-9	B-8b, B-9	B-8b, B-9	B-8b, B-9
B-10: The Project would result in loss of foraging habitat for listed raptor species.	Class II	Class III	Class II	Class II	Class II	Class II
	B-1a, B-6	B-1a, B-6	B-1a, B-6	B-1a, B-6	B-1a, B-6	B-1a, B-6
B-11: The Project would result in loss of listed riparian bird species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-1b, B-6	B-1b, B-6	B-1b, B-6	B-1b, B-6	B-1b, B-6	B-1b, B-6
B-12: The Project would result in the loss of coastal California gnatcatchers.	Class II	Class II	Class II	Class II	Class II	Class II
	B-12	B-12	B-12	B-12	B-12	B-12
B-13: The Project would result in the electrocution of listed bird species.	Class III	Class III	Class III	Class III	Class III	Class III
	B-13	B-13	B-13	B-13	B-13	B-13
B-14: The Project would result in transmission line collisions by listed bird species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-14	B-14, V-17b, V-17c, V-17d	B-14	B-14	B-14	B-14
B-15: The Project would result in the loss of special-status plant species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-7	B-1a, B-1b, B-4, B-7	B-7	B-7	B-7	B-7

Table C.3-7. Impact and Mitigation Summary – Biological Resources						
Impact	Impact Significance					
	Proposed Project	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
B-16: The Project would result in the loss of special-status amphibian species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-1a, B-1b, B-16	B-1a, B-1b, B-16	B-1a, B-1b, B-16	B-1a, B-1b, B-16	B-1a, B-1b, B-16	B-1a, B-1b, B-16
B-17: The Project would result in the loss of special-status reptile species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-1a, B-16, G-2*	B-1a, B-16, G-2*	B-8b, B-16, G-2*	B-8b, B-16, G-2*	B-8b, B-16, G-2*	B-8b, B-16, G-2*
B-18: The Project would result in the loss of aquatic special-status reptile species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-8b, B-16, G-2*	B-8b, B-16, G-2*	B-8b, B-16, G-2*	B-8b, B-16, G-2*	B-8b, B-16, G-2*	B-8b, B-16, G-2*
B-19: The Project would result in the loss of burrowing owls.	Class II	Class II	Class II	Class II	Class II	Class II
	B-19	B-6, B-19	B-6, B-19	B-6, B-19	B-6, B-19	B-6, B-19
B-20: The Project would result in the loss of foraging habitat or disruption of special-status raptor species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-1a, B-6	B-1a, B-6	B-1a, B-6	B-1a, B-6	B-1a, B-6	B-1a, B-6
B-21: The Project would result in the loss of nesting special-status and migratory birds.	Class II	Class II	Class II	Class II	Class II	Class II
	B-1a, B-6	B-1a, B-6	B-1a, B-6	B-1a, B-6	B-1a, B-6	B-1a, B-6
B-22: The Project would result in electrocution of special-status bird species.	Class III	Class III	Class III	Class III	Class III	Class III
	B-13	B-13	B-13	B-13	B-13	B-13
B-23: The Project would result in transmission line collision by special-status bird species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-14	B-13, B-14, V-17b, V-17c, V-17d **	B-13, B-14	B-13, B-14	B-13, B-14	B-13, B-14
B-24: The Project would result in loss of special-status bat species.	Class III	Class III	Class III	Class III	Class III	Class III
	A-1a***, B-24	A-1a***, B-24	A-1a***, B-24	A-1a***, B-24	A-1a***, B-24	A-1a***, B-24
B-25: The Project would result in loss of the American badger.	Class II	Class II	Class II	Class II	Class II	Class II
	A-1a***, B-25	A-1a***, B-25	A-1a***, B-25	A-1a***, B-25	A-1a***, B-25	A-1a***, B-25
B-26: The Project would result in loss of special-status rodent species.	Class II	Class II	Class II	Class II	Class II	Class II
	B-26	B-26	B-26	B-26	B-26	B-26
B-27: The Project would result in impacts to Management Indicator Species	Class II	Class II	Class II	Class II	Class II	Class IV
	A-1a***, B-1a, B-1b, B-2, B-6, B-8a, B-8b, G-2*	A-1a***, B-1a, B-1b, B-2, B-6, B-8a, B-8b, B-27, G-2*	A-1a***, B-1a, B-1b, B-2, B-6, B-8a, B-8b, G-2*	A-1a***, B-1a, B-1b, B-2, B-6, B-8a, B-8b, G-2*	A-1a***, B-1a, B-1b, B-2, B-6, B-8a, B-8b, G-2*	A-1a***, B-1a, B-1b, B-2, B-6, B-8a, B-8b, G-2*
B-28: The Project would result in the loss of jurisdictional waters and wetlands.	Class III	Class III	Class III	Class III	Class III	Class III
	None	None	None	None	None	None
B-29: The Project would affect linkages and wildlife movement corridors.	Class III	Class III	Class III	Class III	Class III	Class III
	None	B-27	None	None	None	None
B-30: The Project would conflict with Los Angeles County's oak tree ordinance.	Class II	Class II	Class II	Class II	Class II	Class II
	B-2	B-2	B-2	B-2	B-2	B-2
B-31: The Project would conflict with the Angeles National Forest Land Management Plan direction for construction within Riparian Conservation Areas within the ANF.	Class III	Class III	Class III	Class III	Class III	Class III
	B-1b	B-1b	B-1b	B-1b	B-1b	B-1b
B-32: The Project would conflict with the City of Santa Clarita General Plan's policies for construction in or adjacent to drainages or waterways.	Class II	Class II	Class II	Class II	Class II	Class II
	B-6, B-8b, B-26	B-6, B-8b, B-26	B-6, B-8b, B-26	B-6, B-8b, B-26	B-6, B-8b, B-26	B-6, B-8b, B-26
B-33: The Project would conflict with the proposed West Mojave Habitat Conservation Plan (HCP).	Class III	Class III	Class III	Class III	Class III	Class III
	None	None	None	None	None	None

Class I = Significant and unavoidable impact; **Class II** = Significant but mitigated to a less-than-significant level; **Class III** = Less-than-significant impact; **Class IV** = Beneficial impact.

* Please see Section C.5.5, Geology, Soils and Paleontology, Proposed Project/Action, Mitigation Measure G-2 (Minimization of Soil Erosion).

** Please see Section C.15.5, Visual Resources, Proposed Project/Action, Mitigation Measures V-17b (Use Magnetic Coils at Entrance Gate), V-17c (Use Only Low-Level, Directional, Shielded Lighting), and V-17d (Only Perform Maintenance Activities During Daylight Hours).

*** Please see Section C.2.5, Air Quality, Proposed Project/Action, Mitigation Measure A-1a (Implement Construction Fugitive Dust Control Plan).

C.3.13 Cumulative Effects

C.3.13.1 Geographic Scope

The geographic extent for the analysis of cumulative impacts related to biological resources includes all areas within five miles of the Project route. Notable or very large projects situated farther than five miles from the Project route were also considered in the geographic scope for this project.

C.3.13.2 Existing Cumulative Conditions

Past and Existing Projects

The Project region contains a combination of NFS lands, utility corridors, residential communities, agricultural and pasture lands, and undeveloped areas. The rapid expansion of population centers and urban growth in this region has resulted in the continued loss of wild lands and the degradation of riparian and natural areas that historically supported populations of unique or rare species. Natural and wilderness areas are gradually being displaced by development, wildlife movement corridors have been modified to the extent that the movement of wildlife is curtailed or limited, and expanding populations are degrading the habitat values in urban/wilderness edge areas.

In the Los Angeles County and adjacent Ventura and Kern Counties rapidly expanding urbanization has resulted in significant alterations to the natural landscape and the fragmentation of open space, isolation of wildlife habitat, and creation of discontinuous or dead-end movement corridors. However, a large amount of relatively unobstructed and natural open space still exists within this region, including large contiguous areas within the ANF and the Los Padres National Forest. Development on NFS lands in this area is primarily limited to small residential communities, OHV use, reservoirs and aqueducts, ranger stations, recreational areas and campgrounds, utility corridors, access roads, hiking trails, and fuel breaks. On non-NFS lands the continued expansion of recreational residents has resulted in the ongoing loss or degradation to habitat for sensitive species. For example, the recreational communities, many of which are maintained as year round or primary residences, result in ongoing degradation to water quality and riparian habitat on Bouquet Creek. This can occur through a variety of mechanisms including water diversion, modification to the bed and bank of the creek, leaks from septic tanks and vehicles, and the introduction of exotic/ornamental plants to the riparian community. The presence of domestic animals also increases the potential for ongoing predation to native wildlife. In addition, within the last 5 years several large wildfires have affected this area by removing the existing climax habitat.

One other cumulative aspect that requires consideration is recreational use of the project area. Some riparian areas support heavy recreational use and provide the public with an aesthetically pleasing area for water play, camping, and wildlife viewing. OHV trails and existing or future access roads can increase the amount of wilderness and NFS lands utilized by the public. Use of these trails has resulted in the introduction or spread of invasive plants and can disrupt wildlife breeding areas (particularly in riparian habitat).

Region wide, the contribution of cumulative projects identified in Table B-5-1 and historic projects including the residential development, construction of fuel oil pipelines such as the Pacific Pipeline, repairs to existing SCE

and LADWP facilities from storm damage, and water infrastructure projects has contributed to the existing cumulative conditions. The list of existing projects within five miles of the proposed Project does not represent the entire cumulative effects area for biological resources nor does it fully identify all the potential ongoing impacts to NFS lands on the ANF. For example, the five mile radius selected for the proposed project does not directly take into account projects that may be occurring in the San Gabriel Mountains such as the proposed Littlerock Reservoir Sediment Removal project which is located over 30 miles east of the project area. In addition, as most of the proposed Project and Alternatives are located along an existing designated utility corridor or occur in developed areas the five-mile radius should provide a description of representative projects that would be required to assess cumulative impacts for the scope of this project.

The past and existing projects identified in Table B-5- have multiple impacts to biological resources in the project area. Some of these include:

- Loss of existing native habitat utilized by sensitive plants and wildlife
- The introduction of exotic plant and animal species
- The fragmentation of existing wildlife corridors, and
- The loss or degradation to riparian habitats.

In general most of the projects identified on the cumulative list that are conducted on private lands have consisted of residential developments and upgrades to infrastructure including water, gas, and electric utilities. In contrast, NFS lands have been subject to recent fuels management activities, mining, utility infrastructure, roadways, and maintenance to the California aqueduct including road and bridge repairs to facilities maintained by the Los Angeles Department of Water and Power and the Department of Water Resources. Major road repairs on the ANF have been ongoing since the winter storms of 2004/2005.

Future Projects

As discussed above and demonstrated by Table B.5-1, ongoing development throughout the cumulative effects area for biology is dominated by residential developments, clustered in and around community developments on non-NFS lands. The expansion of residential development is also representative of reasonably foreseeable future projects in the cumulative effects area, as supported by the aggressive population growth forecast shown in Table B.5-4. Therefore, the impacts to biological resources resulting from the loss or degradation of habitat from past and ongoing projects, as described above, can be expected to continue and increase in the future.

Table B.5-3 (Recent and Future Projects on NFS Lands) lists ongoing and proposed projects on NFS lands in the Santa Clara/Mojave Rivers Ranger District, north of Highway 14. As with the future non-NFS projects, the past and ongoing NFS projects are representative of future NFS projects. Table B.5-3 indicates that most of these projects are focused on repairs, re-establishment, or rehabilitation of existing facilities. As with past NFS developments, any projects requiring grading and earth movement activities, such as roadway improvements, would be expected to result in impacts to vegetation and wildlife. Projects conducted on NFS lands are required to comply with the Forest Plan which identifies strategies and guidelines for reducing impacts to biological resources.

C.3.13.3 Cumulative Impact Analysis

The potential for biological impacts of the proposed Project (described in Sections C.3.5 through C.3.1)1 to combine with the effects of other projects within the geographic scope of the cumulative analysis are described below.

- **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS (Criterion BIO1).** The proposed Project and alternatives have the potential to result in the temporary or permanent loss of native vegetation communities (Impact B-1), temporary damage or permanent loss of oak trees (Impact B-2), loss of foraging habitat for wildlife (Impact B-3), introduction of non-native and invasive plant species (Impact B-4), disturbance of wildlife species through construction activities (Impact B-5), and a potential loss of nesting birds due to construction activities scheduled during the breeding season (Impact B-6). Under the proposed Project these impacts would be mitigated to less than significant levels through the implementation of project mitigation measures. The cumulative projects list seen in Section B.5.3 reflects multiple construction projects, including several large-scale residential and community developments that would likely result in biological impacts similar to the proposed Project. For example the Meadow Peak Housing project would be located adjacent to Haskell Canyon Creek and the proposed Project alignment. This portion of the proposed Project alignment would be the same for Alternatives 1, 2, and 3. Alternatives 4 and 5 would circumvent this particular segment of Haskell Canyon Creek, but they would both result in similar impacts to biological resources including the potential loss of sensitive vegetation communities and riparian habitat that may occur in or adjacent to the creek. Ongoing land development in the Leona Valley including the Ritter Ranch residential development would also likely result in adverse impacts to biological resources such as annual grasslands, wetlands, and riparian communities. The loss of habitats including coastal sage scrub, chaparral, oak woodland, and riparian can be reasonably foreseen as ongoing development continues in the region. Therefore, the impacts to biological resources associated with Criterion BIO1, as described above, have the potential to combine with similar impacts of other projects and would be considered cumulatively significant and unavoidable (**Class I**).

Potential impacts to biological resources associated with Criterion BIO 1 that would be impacted by construction of the proposed Project would also be impacted by construction of Alternatives 1 through 4 as these alternatives would be constructed in or adjacent to the proposed Project. As such, the cumulative effects from Alternatives 1 through 4 would not differ from the proposed Project. Alternative 5 would also result in the same type of impacts as the proposed Project but would occur primarily on non-NFS lands. Region wide the Alternative 5 alignment is also subject to ongoing development and these impacts would also be considered cumulatively significant and unavoidable (**Class I**).

- **Have an adverse effect, either directly or through habitat modifications, on any species listed as endangered, threatened, or proposed or critical habitat for these species (Criterion BIO2).** Construction of the proposed Project or alternatives have the potential to result in the loss of listed plant species (Impact B-7), result in loss of arroyo toads (Impact B-8), result in the loss of California red-legged frogs (Impact B-9), result in loss of foraging habitat for listed raptor species (Impact B-10), result in loss of listed riparian bird species (Impact B-11), result in the loss of coastal California gnatcatchers (Impact B-12), result in the electrocution of listed bird species (Impact B-13), and result in transmission line collisions by listed bird species (Impact B-14). The cumulative projects discussed in Section B.5.3 are concentrated near the northern and southern ends of the Project route. Some of these cumulative projects, particularly the large community developments, may be situated in areas which provide habitat relevant to the potential impacts associated with Criterion BIO2. For example, the Copper Hill and Meadow Peak Housing project would occur in or adjacent to habitat that may support populations of California gnatcatchers and arroyo toads. Continued degradation of native plant communities and riparian habitat in the Santa Clarita Valley from ongoing development will continue to contribute to the decline of listed species or their habitat throughout the region. Alternatives 1 through 5 would also be subject to cumulative impacts. Although portions of the proposed Project or alternatives that occur in rural areas or NFS lands may be subject to reduced effects due to their more isolated locations, overall the combined list of projects unidentified in Table B-5-1 would result in significant cumulative impacts. The increased construction of above ground distribution lines, sub-stations, and switch yards in rural areas may further increase the potential for impacts from bird electrocution of line collisions. Therefore, the impacts to biological resources associated with Criterion BIO2, as described above, have the potential to combine with similar impacts of other projects and would be considered cumulatively significant and unavoidable (**Class I**).
- **Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG, USFWS, or USDA Forest Service (Criterion BIO3).** Many of the cumulative projects discussed in Section B.5.3 are concentrated near the northern and southern ends of the Project route. Some of these cumulative projects, particularly the large community developments, may be situated in areas which provide habitat relevant to the potential impacts associated with Criterion BIO3. The proposed Project and alternatives to the proposed

Project have the potential to result in the loss of special-status plant species (Impact B-15), loss of special-status amphibian species (Impact B-16), loss of special-status reptile species (Impact B-17), loss of aquatic special-status reptile species (Impact B-18), loss of burrowing owls (Impact B-19), loss of foraging habitat or disruption of special-status raptor species (Impact B-20), loss of nesting special-status and migratory birds (Impact B-21), electrocution of special-status bird species (Impact B-22), transmission line collision by special-status bird species (Impact B-23), loss of special-status bat species (Impact B-24), loss of the American badger (Impact B-25), loss of special-status rodent species (Impact B-26)), and impacts to Management Indicator Species (Impact B-27). As described under Criterion BIO2, above, construction of new housing and infrastructure projects will result in further loss to wild lands and riparian areas that support sensitive plants or animals. Large scale housing projects can also contribute to the fragmentation of habitat and the loss of genetic variability between populations by severing linkages and movement corridors. The continued encroachment of residential communities on NFS lands also reduces the buffers that may minimize impacts to important edge communities and transition zones. The impacts to biological resources associated with Criterion BIO3 have the potential to combine with similar impacts of other projects and are therefore cumulatively significant and unavoidable (**Class I**).

- **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 (Criterion BIO4).** The proposed Project and alternatives would result in a less-than-significant loss of jurisdictional waters and wetlands (Impact B-28). Temporarily impacts to a small section of ephemeral drainage would occur in Haskell Canyon. In addition, under Alternative 5, small drainages associated with the new alignment may be crossed by construction equipment but these areas would not be subject to permanent disturbance. Under the proposed Project and alternatives all tower footings and permanent structures would be located outside of scour areas, riparian zones, and wetlands. Region wide, the continued development and expansion of residential communities in the Santa Clarita Valley are likely to result in impacts to jurisdictional waters or wetlands. However, as the proposed Project or alternatives would not result in impacts to Criterion BIO 4 resources, this potential impact is not expected to combine with impacts from other projects in the region. Combined impacts are therefore not expected to occur.
- **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 (Criterion BIO5).** The proposed Project and alternatives would not result in a significant impact to or disrupt linkages and wildlife movement corridors (Impact B-29). Although construction of the proposed Project and alternatives would result in temporary impacts from noise and human presence these activities are short term and no physical barrier to movement would be constructed. Areas that support sensitive fish including Bouquet Creek or areas that may act as movement corridors including San Francisquito Creek of Haskell Canyon would be spanned by the transmission line. Conversely, some of the projects identified in Table B-5-1 include major housing developments located in rural areas along Haskell Canyon, San Francisquito Creek, and Copper Hill Road would likely result in the loss or restriction of wildlife movement along those corridors. As the proposed Project or alternatives would not result in impacts to Criterion BIO 5 resources, this potential impact is not expected to combine with impacts from other projects in the region. Combined impacts are therefore not expected to occur.
- **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances (Criterion BIO6).** The proposed Project and alternatives have the potential to conflict with the Los Angeles County's oak tree ordinance if oak trees are removed from the Haskell Canyon area (Impact B-30) and the City of Santa Clarita General Plan (Impact B-32). No impacts to the Forest Plan are expected to occur as the proposed Project and alternatives would avoid all riparian conservation areas and implement recommended procedures for reducing impacts to condors and other wildlife (Impact B-31). These potential impacts would be reduced to a less-than-significant level for the proposed Project and are not expected to be cumulatively significant. No impact would occur.
- **Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP (Criterion BIO7).** The proposed Project and alternatives have the potential to conflict with the proposed West Mojave Habitat Conservation Plan (Impact B-33). Any potential conflict is expected to be less than significant and is not expected to combine with similar impacts of other projects in the area. No impact would occur.

There are no additional feasible mitigation measures that could be imposed on the proposed Project, or Project Alternatives to further reduce its contribution to cumulative biological effects. All feasible mitigation measures

have been recommended to mitigate Impacts B-1 through B-33. However, as identified for the proposed Project, implementation of recommended Mitigation Measures B-1a through B-27 could be applied to the cumulative projects identified above. For example Mitigation measure B-1a provides restoration for impacts to native vegetation communities, if affected, through revegetation. Mitigation measures such as these applied to other construction projects in the area would help reduce cumulative impacts to biological resources.

C.3.13.4 Cumulative Effects on National Forest System Lands

The potential for biological impacts of the proposed Project described in Sections C.3.5 through C.3.11 to combine with the effects of other projects within the geographic scope of the cumulative analysis on NFS lands are described below.

- **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS (Criterion BIO1).** On NFS lands the proposed Project and Alternatives 1 through 4 have the potential to result in the same types of cumulative impacts identified on non-NFS lands. These include the temporary or permanent loss of native vegetation communities (Impact B-1), temporary damage or permanent loss of oak trees (Impact B-2), loss of foraging habitat for wildlife (Impact B-3), introduction of non-native and invasive plant species (Impact B-4), disturbance of wildlife species through construction activities (Impact B-5), and a potential loss of nesting birds due to construction activities scheduled during the breeding season (Impact B-6). These impacts would occur in areas that support natural habitat including the fuel break areas of the Del Sur Ridge line and the mid-slope areas of Alternative 2. Under the proposed Project these impacts would be mitigated to less than significant levels through the implementation of project mitigation measures, however, the overall loss of habitat region wide, including several large-scale residential and community developments, would likely result in cumulatively combined impacts. The loss of habitat on the ANF including coastal sage scrub, and chaparral, combined with the regions loss of habitat have the potential to combine with similar impacts of other projects and would be considered cumulatively significant and unavoidable (**Class I**).

Potential impacts to biological resources associated with Criterion BIO 1 for Alternative 5 would also result in the same type of impacts as the proposed Project but would occur primarily on non-NFS lands. The relative absence of impacts to vegetation related to the implementation of Alternative 5 and the removal of existing facilities would not result in cumulatively significant or unavoidable impacts to NFS lands, although these impacts would still be considered cumulatively significant and unavoidable region wide. However, basing the Criterion BIO 1 impact solely on NFS lands the implementation of Alternative 5 would result in a less-than-significant (**Class II**) impact with implementation of mitigation.

- **Have an adverse effect, either directly or through habitat modifications, on any species listed as endangered, threatened, or proposed or critical habitat for these species (Criterion BIO2).** Critical habitat for sensitive wildlife that may occur in the proposed Project or alternative alignments does not occur on NFS lands. Construction of the proposed Project or alternatives on NFS lands have the potential to result in the loss of listed plant species (Impact B-7), loss of foraging habitat for listed raptor species (Impact B-10), result in the electrocution of listed bird species (Impact B-13), and result in transmission line collisions by listed bird species (Impact B-14). Arroyo toads, California red-legged frogs, and California gnatcatcher are not expected to occur on NFS lands. However, most other project activities would still have the potential to result in significant contributable impacts to Criterion BIO 2 species including Nevin's barberry, California condor, and sensitive fish. Some of the cumulative projects, particularly the large community developments, may be situated in areas near NFS lands and could result in increased conflict with edge effects to wilderness areas. Continued degradation of native plant communities and riparian habitat in the Santa Clarita Valley from ongoing development would also continue to contribute to the decline of listed species or their habitat throughout the region. Alternatives 1 through 4 would also contribute to significant cumulative impacts to NFS lands. As described above, the proposed Project and Alternatives 1 through 4 would combine with similar impacts of other projects and would be considered cumulatively significant and unavoidable (**Class I**) on NFS lands.

Potential impacts to biological resources associated with Criterion BIO 2 for Alternative 5 would be similar to the proposed Project but would occur primarily on non-NFS lands. The relative absence of impacts to listed species or their habitat related to the implementation of Alternative 5 and the removal of existing facilities would not result in cumulatively significant or unavoidable impacts to NFS lands, although these impacts would still be considered

cumulatively significant and unavoidable region wide. However, basing the Criterion BIO 2 impact solely on NFS lands the implementation of Alternative 5 would result in a less-than-significant (**Class II**) impact with implementation of mitigation.

- **Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG, USFWS, or USDA Forest Service (Criterion BIO3).** The potential impacts associated with Criterion BIO3 on NFS lands would be the same as described for Criterion BIO 2. The proposed Project and alternatives have the potential to result in impacts to special status plants and wildlife. Some of these include nesting birds, raptors, and rare plants. The proposed Project and Alternatives 1 through 4 would also result in direct impacts to MIS including condors, chaparral bird assemblages, and mule deer. As described under Criterion BIO2, above, construction of new housing and infrastructure projects will result in further loss to wild lands and riparian areas that support sensitive plants or animals. As described above, the proposed Project and Alternatives 1 through 4 would combine with similar impacts of other projects and would be considered cumulatively significant and unavoidable (**Class I**) on NFS lands.

Potential impacts to biological resources associated with Criterion BIO 2 for Alternative 5 would be similar to the proposed Project but would occur primarily on non-NFS lands. The relative absence of impacts to sensitive species or MIS or their habitat related to the implementation of Alternative 5 and the removal of existing facilities would not result in cumulatively significant or unavoidable impacts to NFS lands. However, with the exception of MIS these impacts would still be considered cumulatively significant and unavoidable region wide. However, basing the Criterion BIO 3 impact solely on NFS lands the implementation of Alternative 5 would result in a less-than-significant (**Class II**) impact with implementation of mitigation.

- **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 (Criterion BIO4).** The proposed Project and alternatives would not result in impacts to jurisdictional waters and wetlands (Impact B-28) on NFS lands. To comply with the Forest Plan no construction activity would be authorized within 98 feet of riparian conservation areas. As the proposed Project or alternatives would not result in impacts to Criterion BIO 4 resources, this potential impact is not expected to combine with impacts from other projects in the region. Combined impacts are therefore not expected to occur on NFS lands.
- **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 (Criterion BIO5).** The proposed Project and alternatives would not result in a significant impact to or disrupt linkages and wildlife movement corridors (Impact B-29) on NFS lands. By design the aerial transmission line would allow the continued passage of wildlife across the designated utility corridor. Although construction activities would likely reduce the amount of wildlife present during installation of the project these impacts would be considered short term and temporary. As the proposed Project or alternatives would not result in impacts to Criterion BIO 5 resources, this potential impact is not expected to combine with impacts from other projects in the region. Combined impacts are therefore not expected to occur on NFS lands.
- **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances (Criterion BIO6).** The proposed Project and alternatives would not result in conflicts with the current Forest Plan. As previously described the proposed Project and alternatives would avoid all riparian conservation areas and implement recommended procedures for reducing impacts to condors and other wildlife. These potential impacts would be reduced to a less-than-significant level for the proposed Project and are not expected to be cumulatively significant. No impact would occur on NFS lands.
- **Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP (Criterion BIO7).** The proposed Project and alternatives have the potential to conflict with the proposed West Mojave Habitat Conservation Plan (Impact B-33). Any potential conflict is expected to be less than significant and is not expected to combine with similar impacts of other projects in the area. No impact or conflict with the West Mojave Plan would occur on NFS lands.

There are no additional feasible mitigation measures that could be imposed on the proposed Project, or Project Alternatives to further reduce its contribution to cumulative biological effects on NFS lands. All feasible

mitigation measures have been recommended to mitigate Impacts B-1 through B-6, B-7, B-10, B13, B-14, B-28, B29, and B-33. However, as identified for the proposed Project, implementation of recommended Mitigation Measures B-1a through B-27 could be applied to the cumulative projects on NFS lands identified above. For example Mitigation measure B-1a provides restoration for impacts to native vegetation communities, if affected, through revegetation. Mitigation measures such as these applied to other construction projects in the area would help reduce cumulative impacts to biological resources.