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CHAPTER 4 – ENVIRONMENTAL IMPACT ASSESSMENT

4.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Measures	Less-Than-Significant Impact	No Impact
a) 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 the California Department of Fish and Game or United States (U.S.) Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.4.0 Introduction

This section describes biological resources in the San Diego Gas & Electric Company (SDG&E) East County (ECO) Substation Project (Proposed Project) area and identifies potential impacts to habitats and species that could result from construction and operation and maintenance of the Proposed Project. Additionally, potential impacts to riparian communities, wetlands, and migratory wildlife corridors are addressed. The biological resources analysis includes a discussion of applicant-proposed measures (APMs) to reduce potential impacts to a less-than-significant level. Because the White Star Communication Facility rebuild will be constructed within a previously disturbed area adjacent to existing communication facilities, this component is not discussed further as its associated construction, operation, and maintenance will have no impact on biological resources.

4.4.1 Methodology

Records Search

Preliminary investigations included study of aerial photographs, United States (U.S.) Geological Survey (USGS) topographic maps, National Wetland Inventory (NWI) maps, and literature and database searches. In addition, multiple field surveys were conducted of the Proposed Project area by several resource specialists. Other sources of information include the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, San Diego County Bird Atlas, and California Natural Diversity Database (CNDDDB) maintained by the California Department of Fish and Game (CDFG). In addition, the U.S. Fish and Wildlife Service's (USFWS) recovery plans for the endangered arroyo toad, peninsular bighorn sheep, southwestern willow flycatcher, and Quino checkerspot butterfly (QCB), as well as the USFWS's Draft Recovery Plan for the Least Bell's Vireo and the Flat-tailed Horned Lizard Interagency Coordinating Committee's Flat-tailed Horned Lizard Rangeland Management Strategy were reviewed.

All planning documents that are relevant to the Proposed Project area, which include two San Diego County plans, the Mountain Empire Subregional Plan and the San Diego County General Plan, were reviewed.

A CNDDDB search was conducted for all USGS quadrangle maps that lie within two miles of the Proposed Project area, including Tierra del Sol, Live Oak Springs, Jacumba, In-Ko-Pah Gorge, Mount Laguna, Cameron Corners, Campo, Sombrero Peak, Sweeny Pass, and Carrizo Mountain. The results of this search within one mile of the Proposed Project area are depicted in Attachment 4.4-A: CNDDDB Occurrence Maps.

Environmental documents, including the Habitat Assessment for the Sempra Generation Baja Transmission Line Project and the SDG&E Sunrise Powerlink Draft Environmental Impact Report/Draft Environmental Impact Statement and supporting documents, were also reviewed.

Multiple resource specialists conducted several field surveys of the Proposed Project area. Prior to conducting field surveys, target lists were prepared of special-status plants and animals with potential to occur in the Proposed Project area. The Carlsbad office of the USFWS and the El Centro Field Office of the Bureau of Land Management (BLM) each provided a list of

threatened and endangered species known to occur near or within the Proposed Project area. These lists are included in Attachment 4.4-B: BLM and USFWS Species Lists. In addition, resource specialists from both agencies were consulted concerning potential impacts the Proposed Project may have on sensitive species.

General Biological Surveys

Insignia Environmental biologists Jeffrey Coward, Larry Butcher, Kevin Kilpatrick, and Nick Fisher conducted biological surveys of the entire Proposed Project area on February 21 through 22, March 19 through 20, April 2 through 4, April 10, July 15 through 18, July 28 through 31, August 27 through 29, and October 28 through 30 of 2008. Their surveys included the six land parcels (totaling approximately 498 acres), on which the approximately 58-acre ECO Substation and Southwest Powerlink (SWPL) loop-in structures will be constructed, as well as the entire SDG&E property surrounding the existing Boulevard Substation and the 8.5-acre parcel east of the Boulevard Substation where the substation will be rebuilt. All unpaved access roads and locations of proposed new access roads to the substation sites were surveyed. In addition, a 400-foot-wide corridor for the proposed 138 kilovolt (kV) transmission line was surveyed, including pole locations, work areas, existing and proposed access roads, pull and tension sites, staging areas, fly yards, and laydown yards. The White Star Communication Facility rebuild site and surrounding area was also surveyed for biological resources.

The surveyors documented the dominant plant communities and potential habitat for wildlife species focusing on burrows, nests, rocky outcrops, swales, and cavities. They also documented plant and animal species observed, including any signs of wildlife species, such as scat, tracks, and remains. The potential for sensitive plant and animal species, determined by the presence of diagnostic habitat elements, were documented.

Rare Plant Surveys

Directed surveys for special-status plant species potentially occurring in the Proposed Project area were based on the CNPS Botanical Survey Guidelines. Focused surveys for special-status plant species were conducted in 2008 by walking 50- to 100-foot-wide transects of the ECO Substation site, SWPL loop-in structure sites, the area surrounding the existing Boulevard Substation, and the Boulevard Substation rebuild site. At each survey site, dominant habitat characteristics, general soil characteristics, slope, and aspect were recorded. Surveys were floristic in nature and were conducted during the blooming period for each special-status plant species that might occur. Insignia Environmental biologists Nick Fisher and Roy Buck conducted special-status plant species surveys of the ECO Substation site, SWPL loop-in structure sites, and the area surrounding the existing Boulevard Substation on April 2, April 3, and April 4, 2008. The 138 kV transmission line corridor was not surveyed for rare plants in 2008 due to lack of access during the correct phenological period for the target plant species.

Jim Rocks, Cynthia Jones Daverin, Margie Mulligan, and Jon Rebman conducted rare plant surveys of the entire Proposed Project area, including the 138 kV transmission line corridor, in the spring of 2009. A detailed description of the survey methods and results are provided in Attachment 4.4-C: Rare Plant Survey Report.

Protocol-Level Quino Checkerspot Butterfly Surveys

In April 2008, USFWS-permitted biologists Jim Rock and Cynthia Jones Daverin conducted protocol-level QCB surveys of the entire 498-acre site, which includes the sites where the ECO Substation and SWPL loop-in structures will be constructed. The results and associated report were submitted to the USFWS and are included in Attachment 4.4-D: Quino Checkerspot Butterfly Survey Reports.

In March and May 2009, USFWS-permitted biologists Jim Rock and Cynthia Jones Daverin conducted protocol-level surveys for QCB of the 138 kV transmission line corridor and the ECO Substation and SWPL loop-in sites. The complete results and associated report were submitted to the USFWS and are included in Attachment 4.4-D: Quino Checkerspot Butterfly Survey Reports.

Wetlands/Waters of the U.S. Assessment

During the biological field surveys, biologists assessed the entire Proposed Project area for potentially jurisdictional wetlands or waters of the U.S. based on the presence of hydrophytic vegetation, ordinary high water mark, connectivity to blue-line drainages, and hydrology. However, a wetland delineation report (in accordance with the 1987 U.S. Army Corps of Engineers [USACE] Wetland Delineation Manual) was not performed.

4.4.2 Existing Conditions

Regulatory Background

Federal

Federal Endangered Species Act

The federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service. The FESA prohibits take of endangered wildlife, where "take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (16 United States Code [U.S.C.] §§ 1532(19), 1538). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging-up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16 U.S.C. § 1538(c)).

Under Section 7 of the FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed species (including plants) or its critical habitat. Through consultation and the issuance of a Biological Opinion, the USFWS may issue an incidental take statement, allowing take of the species that is incidental to another authorized activity, provided that the action will not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties with the development of a habitat conservation plan (HCP), such as SDG&E's Subregional Natural Community Conservation Plan (NCCP) and Low-Effect HCP for the QCB.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) recognizes international treaties between the U.S. and other countries that have been accorded to protect migratory birds and any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities:

- Falconry
- Raptor propagation
- Scientific collecting
- Special purposes (rehabilitation, education, migratory game bird propagation, and salvage)
- Take of depredating birds, taxidermy, and waterfowl sale and disposal

The regulations governing migratory bird permits can be found in 50 Code of Federal Regulations (CFR) Part 13 (General Permit Procedures) and 50 CFR Part 21 (Migratory Bird Permits).

Clean Water Act

The purpose of the Clean Water Act (CWA) is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 404 of the CWA prohibits the discharge of fill material into waters of the U.S. without a permit from the USACE. The definition of waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas “that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR § 328.3(b)). The U.S. Environmental Protection Agency also has authority over wetlands and may override an USACE permit.

Substantial impacts to wetlands may require an Individual Permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions. For the Proposed Project, this certification or waiver will need to be issued by the Regional Water Quality Control Board (RWQCB) for the Colorado River Basin.

*State**California Endangered Species Act*

The California Endangered Species Act (CESA), adopted in 1984, generally parallels the main provisions of the FESA. Section 2080 of the Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the Fish and Game Code as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful projects. State lead agencies are required to consult with the CDFG to ensure that any action they undertake is not

likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

Fully Protected Species

The State of California first began to designate species as “fully protected” prior to the creation of the CESA and the FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, including fish, amphibians, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the CESA and/or the FESA. Fully protected species may not be taken or possessed at any time (Fish and Game Code § 4700).

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code §§ 1900–1913) was created with the intent to “preserve, protect, and enhance rare and endangered plants in this State.” The NPPA is administered by the CDFG. The Fish and Game Commission has the authority to designate native plants as “endangered” or “rare” and to protect them from take.

Fish and Game Code Section 1600

Sections 1601 through 1606 of the California Fish and Game Code require that a Notification of Lake or Streambed Alteration Agreement Application be submitted to the CDFG for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” The CDFG reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFG and applicant is the Lake or Streambed Alteration Agreement.

Fish and Game Code Sections 3503, 3513, and 3800

The State of California has incorporated the protection of birds of prey in Sections 3503, 3513, and 3800 of the California Fish and Game Code.

Local

San Diego County General Plan

The vegetation and wildlife section of the Conservation Element (Part X) of the San Diego County General Plan includes biological resource policies relevant to the Proposed Project. These policies include:

- Policy 5 (X-47): San Diego County shall encourage the use of native plant species in review of landscaping and erosion control plans for public and private projects.
- Policy 6 (X-47): If a project is determined to have significant adverse impacts on plants or wildlife, an acceptable mitigating measure may be voluntary donation of land or monies for acquisition of land of comparable value to wildlife.

- Policy 9 (X-52): When significant adverse habitat modification is unavoidable, San Diego County will encourage project designers to provide mitigating measures in their design to protect existing habitat.
- Policy 16 (X-54): The County will regulate major land-clearing projects to minimize significant soil erosion, and the destruction of archaeological, historic, and scientific resources and endangered species of plants and animals.

San Diego County Code of Regulatory Ordinances

The San Diego County Code of Regulatory Ordinances does not include any ordinances protecting specific tree species (e.g., heritage trees, landmark trees, etc.) or any other biological resource-related ordinances relevant to the Proposed Project.

Existing and Proposed Plans

San Diego Gas & Electric Company Subregional Natural Community Conservation Plan

Under Section 10(a) of the FESA, SDG&E developed this comprehensive multiple species and habitat NCCP to effectively preserve and enhanced covered sensitive species and their native habitats during operation, maintenance, and expansion of its electric and natural gas transmission system (16 U.S.C. § 1539). In addition, this NCCP also is a permit issued pursuant to Fish and Game Code section 2081¹ with an implementation agreement with the CDFG for the management and conservation of multiple species and their associated habitats as established according to the CESA and the state's NCCP Act.

The purpose of the Subregional NCCP is to establish and implement a long-term agreement between SDG&E, USFWS, and the CDFG for the preservation and conservation of sensitive species and their habitat while allowing SDG&E to develop, install, maintain, operate, and repair its facilities necessary to provide energy services to customers living within SDG&E's service area. The NCCP does not cover major expansions of SDG&E's electric system and only covers new electric substations that will result in up to 20 acres of habitat disturbance. Although the Proposed Project is not covered by the NCCP, several measures to minimize potential impacts to sensitive species within the NCCP will be utilized during the construction of the Proposed Project. Once the Proposed Project is completed, SDG&E will implement the NCCP for maintenance and operational activities associated with all of the Proposed Project components.

San Diego Gas & Electric Company's Low-Effect Habitat Conservation Plan for the Quino Checkerspot Butterfly

SDG&E prepared a Low-Effect HCP to minimize and mitigate the effects of its activities on the federally endangered QCB and to obtain incidental take authorization for QCB from the USFWS. The HCP addresses potential impact to the QCB from the use, maintenance, and repair of existing gas and electric facilities and allows for typical expansions to those systems. Other than maintenance of existing access roads, SDG&E activities include, without limitation, all current and future actions arising out of, or in any way connected with, the siting, design,

¹ Fish and Game Code sections 2081(b) and (c) allow the CDFG to issue an incidental take permit for a state-listed threatened and endangered species only if specific criteria are met. (*See also* CCR, tit. 14, § 783.4(a),(b).)

installation, construction, use, maintenance, operation, repair, and removal of facilities within SDG&E's service territory.

The HCP addresses incidental take within the HCP area associated with limited expansion of the electrical generation capacity or gas transmission systems, including:

- New electrical transmission line facilities that do not extend more than 30 miles outside the HCP area
- Electrical interconnections with other utilities that do not extend more than 30 miles outside the HCP area
- New substations and regulator stations with total habitat impacts under 20 acres
- New gas compressor stations with total habitat impacts under 10 acres

The HCP emphasizes protection of habitat through impact avoidance and use of operational protocols designed to avoid or minimize impacts to the QCB. The HCP was prepared in consultation with the USFWS to fulfill the requirements of Section 10(a)(1)(B) permit application for the aforementioned proposed activities. Although the Proposed Project is not covered by the HCP, SDG&E will be consistent with the general protocols within the HCP for construction of the proposed facilities. Once the Proposed Project is completed, SDG&E will implement the HCP for maintenance and operational activities associated with all of the Proposed Project components.

BLM East San Diego County Resource Management Plan and Final Environmental Impact Statement

A new Resource Management Plan (RMP) and Environmental Impact Statement for the Eastern San Diego County Planning Area were prepared in November 2007 by the BLM. The Eastern San Diego County Planning Area spans a portion of the eastern escarpment of the Peninsular Mountain Ranges. The Planning Area is bordered by the San Diego-Riverside County border to the north, the U.S.-Mexico border to the south, the San Diego-Imperial County border to the east, and the Western San Diego County Planning Area to the west. The main goal of the RMP is to provide guidance in the management of lands and resources administrated by the El Centro Field Office in eastern San Diego County to achieve the following:

- address conflicts between motorized/mechanized, and non-motorized/non-mechanized recreationists;
- protect sensitive natural and cultural resources from impacts due to recreational use, livestock grazing, and other land uses;
- provide guidance for renewable energy development; and
- address other planning issues raised during the scoping process.

San Diego County Draft East County Multiple Species Conservation Program Plan

The Multiple Species Conservation Program (MSCP) is a comprehensive habitat conservation planning program for southwestern San Diego County. The purpose of the MSCP is to preserve a network of habitat and open space while protecting biodiversity and enhancing the region's quality of life. The MSCP provides an economic benefit by reducing constraints on future

development and decreasing the costs of compliance with federal and state laws protecting biological resources. The MSCP Plan was developed cooperatively by participating jurisdictions and special districts in partnership with the wildlife agencies, property owners, and representatives of the development industry and environmental groups. The MSCP Plan was designed to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time.

The Proposed Project area does not lie within the current jurisdiction of the MSCP; however, the Proposed Project area will fall within the proposed planning area of the San Diego County Draft East County MSCP Plan. This subarea plan of the current MSCP is not expected to be finalized until 2010 or later.

Biological Setting

The Proposed Project components, including the ECO Substation, SWPL loop-in structures, 138 kV transmission line, and Boulevard Substation rebuild are to be located in the far southeastern portion of San Diego County, within a desert transition region of southern California. This area receives an average of 12.67 inches of rainfall per year, with the majority of all precipitation falling between November and May. Rainfall between June and October averages 0.40 inches per month. Precipitation decreases to the east, with the average annual rainfall measuring 2.42 inches per year in Coyote Wells, located approximately 16 miles northeast of the ECO Substation site.

The Proposed Project area is situated from approximately 2,600 feet to over 3,500 feet above mean sea level. All habitats and vegetation communities that are located within the ECO Substation and Boulevard Substation rebuild footprints or crossed by the 138 kV transmission line right-of-way (ROW) are described in the following section. Plant community descriptions are characterized according to R.F. Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California, CDFG's Guide to Wildlife Habitats in California and California Wildlife Habitat Relationship System, and James Lightner's San Diego County Native Plants.

Plant Communities and Associated Wildlife

Seven natural plant communities occur within the Proposed Project area. These are chamise-redshank chaparral, coastal oak woodland, juniper woodland, mixed desert scrub, riparian scrub, shadscale scrub, and fresh emergent wetland. A description of each plant community, associated and observed wildlife species, and location of each community within the Proposed Project area follows. Maps depicting the different vegetation communities in relation to the project location are provided in Attachment 4.4-E: Vegetation Communities Maps.

Chamise-Redshank Chaparral

Chamise-redshank chaparral is most common on south- and west-facing slopes with thin soils and little accumulation of organic material. This plant community is typically found in Mediterranean-type climates with annual precipitation of 12 inches to 15 inches per year and less than 20 percent of total precipitation occurring in summer. Typical plant species found within chamise-redshank chaparral include chamise (*Adenostoma fasciculatum*), redshank (*Adenostoma sparsifolium*), ceanothus (*Ceanothus* spp.), manzanita (*Arctostaphylos* spp.), laurel sumac (*Rhus*

laurina), and scrub oak (*Quercus* spp.). Chamise-redshank chaparral occurs throughout the western portion of the 138 kV transmission line corridor.

Wildlife species typically associated with chamise-redshank chaparral include several bird species, such as California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), California thrasher (*Toxostoma redivivum*), Bewick's wren (*Thryomanes bewickii*), and western scrub-jay (*Aphelocoma californica*). This habitat also provides cover and forage for mammal species, including California ground squirrel (*Spermophilus beecheyi*) and mule deer (*Odocoileus hemionus*). Side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*) are also commonly found in this habitat.

Coastal Oak Woodland

Coastal oak woodlands are extremely variable with an overstory of deciduous and evergreen hardwoods and an equally variable understory. Coastal oak woodlands occupy a variety of Mediterranean-type climates that vary from north to south and west to east, where precipitation occurs in the milder winter months followed by hot, dry summers. Coastal oak woodlands generally occur on moderately to well-drained soils that are moderately deep and have low to medium fertility. Composition of both overstory and understory of coastal oak woodland varies and reflects the environmental diversity over which this habitat occurs. On drier, interior sites, such as the Proposed Project area, coast live oak (*Quercus agrifolia*) dominates and is associated typically with Engelmann oak (*Quercus engelmannii*), and, at higher elevations, California black oak (*Quercus kelloggii*). A small amount of coastal oak woodland occurs along the 138 kV transmission line corridor.

Wildlife species typically associated with coastal oak woodland include a large number of bird species, such as Cooper's hawk (*Accipiter cooperii*), northern flicker (*Colaptes auratus*), Nuttall's woodpecker (*Picoides nuttallii*), California quail (*Callipepla californica*), and wild turkey (*Meleagris gallopavo*). Mammal species—mule deer, American badger (*Taxidea taxus*), and California ground squirrel—are known to occur in coastal oak woodlands.

Juniper Woodland

Juniper woodland habitats are characterized as open to dense aggregations of California junipers (*Juniperus californica*) in the form of tree-like shrubs or small trees. Dispersion of junipers ranges from small clumps to widely scattered single plants. Denser stands are commonly associated with a grassy understory; whereas, a shrub understory is found where junipers are more open. Shrub species typically associated with juniper habitats in desert transitional areas include cholla cactus (*Opuntia* spp.), flat-top buckwheat (*Eriogonum fasciculatum*), Mormon tea (*Ephedra californica*), and desert agave (*Agave deserti*). Typical forbs and grasses include Kentucky bluegrass (*Poa pratensis*), California goldfields (*Lasthenia californica*), and curve-nut combseed (*Pectocarya recurvata*). Juniper woodlands occur within the northern portion of the ECO Substation site and the eastern portion of the 138 kV transmission line corridor.

Typical wildlife species associated with juniper woodlands include whiptails (*Aspidoscelis* sp), side-blotched lizards, Bewick's wren, western scrub-jay, black-tailed jackrabbit (*Lepus californicus*), and woodrat (*Neotoma* sp.). In addition, juniper berries are an important food source for wintering birds and several mammals consume juniper foliage.

Mixed Desert Scrub

Mixed desert scrub habitats typically are open, scattered assemblages of broadleaved or deciduous microphyll shrubs, usually between 1.5 and 6.5 feet in height. Canopy cover is generally less than 50 percent, often with bare ground between plants. Mixed desert scrub is characterized by relatively evenly spaced, medium- to large-sized shrubs, shrub-sized succulents, and cacti. This habitat type is not dominated by one or a few species; rather, dominance is shared by a number of species, including Mormon tea, cholla cactus, jojoba (*Simmondsia chinensis*), California juniper, and desert agave. Mixed desert scrub is found within the ECO Substation, SWPL loop-in structure sites, and the 138 kV transmission line corridor.

Common wildlife species associated with mixed desert scrub include gopher snake (*Pituophis catenifer*), side-blotched lizard, California kingsnake (*Lampropeltis getula californiae*), scrub jay, California thrasher, black-throated sparrow (*Amphispiza bilineata*), black-tailed jackrabbit, pocket mice (*Chaetodipus* spp.), antelope ground squirrel (*Ammospermophilus* spp.), common raven (*Corvus corax*), and coyote (*Canis latrans*).

Riparian Scrub

Riparian scrub communities are often comprised of mulefat (*Baccharis salicifolia*) and broom baccharis (*Baccharis sarothroides*) within intermittent stream channels with fairly coarse substrate and moderate depth to the water table. Riparian trees species common to riparian scrub include interior live oak (*Quercus agrifolia oxyadenia*), willow (*Salix* spp.), Fremont cottonwood (*Populus fremontii*), and California sycamore (*Plantanus racemosa*). A limited amount of riparian scrub occurs within the western portion of the 138 kV transmission line corridor.

Common wildlife species associated with riparian scrub include Pacific treefrog (*Hyla regilla*), black phoebe (*Sayornis nigricans*), ash-throated flycatcher (*Myiarchus cinerascens*), western scrub jay (*Aphelocoma californica*), white-crowned sparrow (*Zonotrichia leucophrys*), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

Shadscale Scrub

Shadscale scrub is comprised of dominant colonies of saltbush (*Atriplex* spp.), with little or no understory occurring often on poorly drained flats with heavy, somewhat alkaline soil, adjacent to mixed desert scrub communities. The total cover is often high, with little bare ground between the shrubs. This vegetation community is abundant in desert sinks and flats, below 3,500 feet in elevation. Shadscale scrub occurs in the form of a small, pure stand of desert saltbush (*Atriplex polycarpa*) within the eastern portion of the 138 kV transmission line corridor.

Wildlife species typically associated with shadscale scrub include Gambel's quail (*Callipepla gambelii*), mourning dove (*Zenaida macroura*), jackrabbit (*Lepus* spp.), and mule deer.

Fresh Emergent Wetland

Fresh emergent wetland habitats can occur on nearly all exposures and slopes, provided a basin or depression is saturated or at least periodically flooded. However, they are most common on level to gently rolling topography. They are found in various landscape depressions or at the edge of rivers or lakes. Fresh emergent wetlands are characterized by erect, rooted herbaceous

hydrophytes. Dominant vegetation is generally perennial monocots approximately four feet tall. All emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment. On the upper margins of fresh emergent wetlands, saturated or periodically flooded soils support several moist soil plant species including wire grass (*Eleocharis macrostachya*), Mariposa rush (*Juncas dubius*), and on more alkali sites, saltgrass (*Distichlis spicata*). One small fresh emergent wetland is located along the 138 kV transmission line corridor near milepost (MP) 3.5.

Fresh emergent wetlands are among the most productive wildlife habitats in California. They provide food, cover, and water for more than 160 species of birds and numerous mammals, reptiles, and amphibians, including marsh wren (*Cistothorus palustris*), black phoebe, red-winged blackbird (*Agelaius phoeniceus*), Pacific chorus frog (*Pseudacris regilla*), and raccoon.

General Biological Survey Results

East County Substation and Southwest Powerlink Loop-In

Mixed desert scrub and juniper woodland encompasses the ECO Substation site, SWPL loop-in structure sites, and surrounding areas. Approximately 14.5 acres of mixed desert scrub occurs along the southeastern portion of the ECO Substation site footprint, and is dominated by Mormon tea, cholla cactus, jojoba, California juniper, desert agave, water jacket (*Lycium andersonii*), lotebush (*Ziziphus parryi* var. *parryi*), and boundary goldenbush (*Ericameria brachylepis*). Mojave yucca (*Yucca schidigera*) and creosote bush (*Larrea tridentata*) also occur toward the west end of the site, while desert apricot (*Prunus fremontii*) occurs mostly toward the east end of the site. Approximately 74.5 acres of juniper woodland covers the remaining portion of the ECO Substation site footprint and is dominated by California juniper with associated shrubs of desert agave, water jacket, Mormon tea, and cholla cactus.

The density of the herb layer in both vegetation communities is variable, ranging from 30 to 60 percent cover, and consists primarily of native species, although two of the most abundant herb species are non-native. Widespread and abundant herb species include the native species California goldfields, curve-nut combseed and non-native species, including red-stemmed filaree (*Erodium cicutarium*) and common Mediterranean grass (*Schismus barbatus*). White fiesta flower (*Pholistoma membranaceum*) and California mustard (*Guillenia lasiophylla*) are widespread, predominantly under and near shrubs. A large number of herbs, including bristly fiddleneck (*Amsinckia tessellata*), two species of cryptantha (*Cryptantha angustifolia*, *C. pterocarya*), Malpais bluegrass (*Poa secunda* ssp. *secunda*), common phacelia (*Phacelia distans*), and California suncup (*Camissonia californica*) are widespread and characteristic, but less abundant. Species especially characteristic of the western portion of the ECO Substation site include California desert dandelion (*Malacothrix californica*) and California tickseed (*Coreopsis californica* var. *californica*); species especially characteristic of the eastern portion of this site include Fremont pincushion (*Chaenactis fremontii*) and California butterwort (*Senecio californicus*).

During the field surveys of the 498-acre site, three inactive bird nests within juniper bushes and one inactive nest on a SWPL structure along the western edge of the site were observed. Small mammal burrows, ranging in size from a few inches to two feet in diameter at the entrance, were

found in high densities throughout the site. Large rock outcrops were observed along the extreme northern and eastern edges of the site.

Wildlife species observed during the field surveys of the ECO Substation site, SWPL loop-in structure sites, and surrounding area include painted ladies butterflies (*Vanessa cardui*), gopher snake, granite spiny lizard (*Sceloporus orcutti*), orange-throated whiptail (*Cnemidophorus hyperythrus*), Scott's oriole (*Icterus parisorum*), horned lark (*Eremophila alpestris*), red-tailed hawk (*Buteo jamaicensis*), western scrub-jay, California thrasher, phainopepla (*Phainopepla nitens*), black-throated sparrow, turkey vulture (*Cathartes aura*), common grackle (*Quiscalus quiscula*), antelope ground squirrel, and black-tailed jackrabbit. In addition, several small, rodent-sized, unidentified mammals were observed.

138 kV Transmission Line

A variety of habitat types occur within the 138 kV transmission line study corridor, including chamise-redshank chaparral, coastal oak woodland, juniper woodland, mixed desert scrub, riparian scrub, shadscale scrub, and fresh emergent wetland. In addition, the 138 kV transmission line study corridor crosses an active agricultural field, residential areas, and equestrian facilities.

Chamise-redshank chaparral occupies vast areas of the eastern portion of the 138 kV transmission line study area from approximately MP 5.6 to MP 6.0 and MP 7.2 to MP 13.4 (with a few small breaks of other oak woodland and residential areas) and encompasses approximately 303 acres. The composition of this habitat type within the study area varies from nearly pure stands of chamise or redshank, to areas of co-dominance of the two species in association with a diverse assortment of shrub species, to small stands of white sage (*Salvia munzii*). Other shrubs observed within chamise-redshank chaparral included manzanita, scrub oak, cholla cactus, sugar bush (*Rhus ovata*), and flat-topped buckwheat.

Coastal oak woodland occupies four small areas of the transmission line study corridor. Two small patches occur near MP 7.9 and MP 8.1 and two other patches range from approximately MP 11.3 to MP 11.6 and MP 11.8 to MP 11.9. Coastal oak woodland vegetation encompasses approximately 6.5 acres. The overstory of the coastal oak woodland within the study area is completely composed of interior live oak. Manzanita, chamise, and ceanothus form the understory.

Juniper woodland occupies areas in the eastern portion of the transmission line study area, from approximately MP 0 to MP 0.9 and encompasses approximately 23.5 acres. California juniper is the dominant species with associated shrubs of desert agave, water jacket, Mormon tea, and cholla cactus.

Mixed desert scrub occupies vast areas of the western portion of the 138 kV transmission line study area from approximately MP 0.9 to MP 2.7, MP 3.0 to MP 3.3, MP 3.5 to MP 5.7, and MP 6.0 to MP 7.2 and encompasses approximately 273 acres. Mixed desert scrub within this area is dominated by Mormon tea, cholla cactus, jojoba, desert agave, water jacket and boundary goldenbush. Mojave yucca, creosote bush, and catclaw acacia (*Acacia greggii*) are also important shrub components.

Riparian scrub occurs in four locations, encompassing approximately 7 acres along the 138 kV transmission line study corridor. Two areas occur near MP 7.8 and MP 11.5, where Boundary Creek crosses the ROW. The other two areas occur near MP 8.1, which is within an unnamed drainage/wash, and near MP 3.4, which is within Carrizo Wash. The riparian scrub areas located within the Proposed Project area are dominated by mulefat, willows, and catclaw acacia. The understory is primarily rushes, monkeyflower (*Mimulus* sp.) and waterweed (*Baccharis sergiloides*). Within the Proposed Project area, riparian scrub is closely associated with oak woodland areas, which typically occur adjacent to these riparian desert wash areas.

Shadscale scrub occurs in only one location within the Proposed Project area, from approximately MP 2.7 to MP 2.9 and encompasses approximately 16.5 acres along the 138 kV transmission line study area. This habitat type takes the form of a small, pure stand of desert saltbush.

Three water features as identified on USFWS NWI-maps are crossed by the 138 kV transmission line. One fresh emergent wetland, located near MP 3.4, encompasses approximately two acres. This wetland contains no shrubs, has a few small trees, and has a dominant ground cover of salt grass, which is a low-growing perennial plant adapted to salt water and alkaline soils. There was evidence of recent cattle grazing within this wetland area. The second fresh emergent wetland, located near MP 11.5, encompasses approximately three acres and shows evidence of human disturbance, including plowing, mowing and cattle grazing. Non-native grasses currently dominate this area. The third NWI site is located near MP 2.5 and is considered a riverine feature located within Carrizo Creek.

During the field surveys of the 138 kV transmission line study area, two inactive bird nests within juniper bushes near MP 2.5 and MP 3.5 and six inactive raptor nest on the SWPL structures located near MP 0.3, MP 0.8, MP 2.4, and MP 6.2, MP 7.1, and MP 7.5 were observed and are depicted on the vegetation communities maps in Attachment 4.4-E: Vegetation Communities Maps. Small mammal burrows, ranging in size from a few inches to more than two feet in diameter at the entrance, were found in varying densities throughout the corridor. Large rock outcrops were observed in several areas, generally near MP 1.0, MP 4.0, MP 7.0 to MP 9.0, MP 10.5, and MP 11.5 to MP 12.0.

Wildlife species observed during the field surveys of the 138 kV transmission line ROW include painted ladies butterflies, red coachwhip (*Masticophis flagellum piceus*), gopher snake, southern Pacific rattlesnake (*Crotalus helleri*), granite spiny lizard, western fence lizard, orange-throated whiptail, Anna's hummingbird (*Calypte anna*), black phoebe, black-throated sparrow, California towhee, western kingbird (*Tyrannus verticalis*), mourning dove, horned lark, Bewick's wren, Cooper's hawk, red-tailed hawk, western scrub-jay, California thrasher, phainopepla, turkey vulture, antelope ground squirrel, coyote, and black-tailed jackrabbit.

Boulevard Substation Rebuild

Fairly undisturbed chamise-redshank chaparral occupies a relatively narrow, L-shaped zone, south and west of the existing Boulevard Substation. This chaparral is characterized by a somewhat variable cover of large shrubs, mostly at 30 to 70 percent cover, with some localized areas near 100 percent cover. The principal dominant shrubs are chamise and redshank with

associated shrubs including Muller’s oak (*Quercus cornelius-mulleri*), Mexican manzanita (*Arctostaphylos pungens*), cholla cactus, sugar bush, cupleaf ceanothus (*Ceanothus greggii* var. *perplexans*), and, in open areas, interior goldenbush (*Ericameria linearifolia*). The small, annual herb California goldfields is locally very abundant in openings. Common phacelia (*Phacelia distans*), western tansy-mustard (*Descurainia pinnata*), and non-native annual grasses, including foxtail chess (*Bromus madritensis* ssp. *rubens*) and cheat grass (*Bromus tectorum*), are locally moderately abundant under shrubs.

The area of the Boulevard Substation rebuild to the east of the existing substation is an approximate 8.5-acre lot with eight small buildings, garden, and disturbed areas. There are approximately eight mature interior live oak trees concentrated toward the southern portion of the property.

Wildlife species observed during the surveys of the area around the existing Boulevard Substation and adjacent rebuild site included western fence lizard, red-tailed hawk, mourning dove, Anna’s hummingbird, black phoebe, western scrub-jay, common raven, and western bluebird (*Sialia mexicana*).

Special-Status Species

Based on habitat suitability and CNDDDB search results of all surrounding quadrangle maps, several special-status species, as described in the following subsections, have the potential to occur in the Proposed Project area. CNDDDB occurrences within one mile of the Proposed Project area are depicted on the maps in Attachment 4.4-A: CNDDDB Occurrence Maps.

Sensitive Plants

Special-status plant species include those species listed by the USFWS, CDFG, and BLM as endangered, threatened, proposed, or candidate species, and those listed as sensitive or rare. In addition, sensitive plant species include those occurring on the CNPS Inventory of Rare and Endangered Vascular Plants of California (2001). Special-status plant species with the potential to occur in the Proposed Project area appear in Table 4.4-1: Sensitive Species with the Potential to Occur.

A total of 25 special-status plant species occur or may occur within the Proposed Project area, including:

- four sensitive plant species that are present,
- one sensitive plant species with a high potential to occur,
- nine sensitive species with a moderate potential to occur, and
- eleven sensitive species that have a low potential to occur.

In addition, eight sensitive species were determined to have no potential to occur within the Proposed Project area. Species that occur or have a moderate to high potential to occur within the Proposed Project area are discussed in detail as follows.

Jacumba Milk-Vetch

Jacumba milk-vetch (*Astragalus douglasii* var. *perstrictus*) is a perennial herb in the Fabaceae family that inhabits chaparral, cismontane woodland, pinyon-juniper woodland, riparian scrub, rocky areas, and valley/foothill grassland. This species typically occurs between 2,900 and 4,500 feet in elevation and blooms from April through June. Threats to this species include development and grazing.

Two CNDDDB occurrences of Jacumba milk-vetch are within one mile of the Proposed Project area, including northwest of the Boulevard Substation and near MP 1.0 along the 138 kV transmission line corridor. Several small populations of Jacumba milk-vetch were observed between proposed SP 1 and proposed SP 49 and within the Boulevard Substation Rebuild site during the rare plant surveys of 2009. Suitable habitat for the species occurs scattered throughout the Proposed Project area.

California Ayenia

California ayenia (*Ayenia compacta*) is a perennial herb in the Sterculiaceae family that inhabits sandy and gravelly washes in the desert and dry desert canyons within Mojave Desert scrub and Sonoran desert scrub in San Diego County, Riverside County, San Bernardino County, and Baja California, Mexico. The species typically occurs between 400 and 3,300 feet in elevation. Threats to this species include development and grazing.

No CNDDDB occurrences of California ayenia are within one mile of the Proposed Project area and this species was not observed during the rare plant surveys of 2008 and 2009. However, suitable habitat for the species occurs within the Proposed Project area at the ECO Substation and SWPL loop-in structure sites and the eastern portion of the 138 kV transmission line corridor.

Tecate Tarplant

Tecate tarplant (*Deinandra floribunda*) is an annual herb in the Asteraceae family that blooms from August to October. This species inhabits chaparral and coastal scrub in San Diego County and Baja California, Mexico. The species is typically found between 230 to 4,005 feet in elevation. Threats to the Tecate tarplant include grazing and development.

Four CNDDDB occurrences of Tecate tarplant are located within one mile of the Proposed Project area, including two north of the Boulevard Substation, one southeast of the Boulevard Substation, and one south of MP 4.0 of the 138 kV transmission line corridor. Suitable habitat for the species occurs scattered throughout the western portion of the Proposed Project area. However, this species was not observed during the rare plant surveys of 2008 and 2009.

Table 4.4-1: Sensitive Species with the Potential to Occur

Species Name	Listing Status ²	Habitat Requirements	Potential to Occur
Plants			
Jacumba milk-vetch (<i>Astragalus douglasii</i> var. <i>perstrictus</i>)	1B.2	Found between 2,955 and 4,495 feet in elevation. Inhabits chaparral, cismontane woodlands, riparian scrub, pinyon or juniper woodlands, valley or foothill grasslands, and rocky areas.	Suitable habitat is present within the Proposed Project area. One CNDDDB occurrence was recorded along the eastern portion of the 138 kV transmission line corridor. Observed during the 2009 focused botanical surveys between proposed SP 1 and proposed SP 47 and within the Boulevard Substation rebuild site. Present.
California ayenia (<i>Ayenia compacta</i>)	2.3	Found between 450 and 3,300 feet in elevation. Sandy and gravelly washes in the desert and dry desert canyons within Mojave desert scrub and Sonoran desert scrub.	Suitable habitat is present along the 138 kV transmission corridor and around the ECO Substation site. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Moderate Potential.
Elephant tree (<i>Bursera microphylla</i>)	2.3	Found between 620 to 2,200 feet in elevation. Inhabits Sonoran desert scrub on hillsides and washes.	Marginal habitat is located along lower elevations of Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. No Potential.
Pink fairy-duster (<i>Calliandra eriophylla</i>)	2.3	Found between 350 and 4,500 feet in elevation. Inhabits sandy washes, slopes, and mesas in San Diego County.	Marginal habitat is located along the eastern portion of the Proposed Project area. One CNDDDB occurrence is within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.
Delicate clarkia (<i>Clarkia delicata</i>)	1B.3	Found between 2,296 and 3,280 feet in elevation. Occurs in Mojave desert scrub in rocky, gravelly, and sandy soils.	Marginal habitat is located along the extreme eastern portion of the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.

² Explanation of state and federal listing codes

Federal listing codes:

FE: Federally listed as Endangered
BLMS: BLM Sensitive Species

California listing codes:

CE: State-listed as Endangered
CT: State-listed as Threatened
CR: State-listed as Rare
CFP: State-list Fully Protected
CSC: State Species of Special Concern

California Native Plant Society lists:

1B.1: Rare, threatened, or endangered in California or elsewhere; seriously threatened in California
1B.2: Rare, threatened, or endangered in California or elsewhere; fairly threatened in California
1B.3: Rare, threatened, or endangered in California or elsewhere; not very threatened in California
2.1: Rare, threatened, or endangered in California only; seriously threatened in California
2.2: Rare, threatened, or endangered in California only; fairly threatened in California
2.3: Rare, threatened, or endangered in California only; not very threatened in California

Species Name	Listing Status ²	Habitat Requirements	Potential to Occur
Dunn's mariposa-lily (<i>Calochortus dumii</i>)	1B.2	Found between 1,200 and 5,900 feet in elevation. Inhabits closed-cone coniferous forest and chaparral on gabbro or metavolc soils.	Marginal habitat is located within the western portion of the 138 kV transmission line corridor. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.
Wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>)	2.2	Found between sea level and 1,200 feet in elevation and inhabits chaparral communities.	The Proposed Project area is outside of the known elevation range for the species. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. No Potential.
Tecate tarplant (<i>Deinandra floribunda</i>)	1B.2	Found between 230 and 4,005 feet in elevation. Inhabits chaparral and coastal scrub.	Suitable habitat is present within the western portion of the Proposed Project area. Four CNDDB occurrences are along the 138 kV transmission line corridor and near the Boulevard Substation. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. High Potential.
Cuyamaca larkspur (<i>Delphinium hesperium</i> ssp. <i>cuyamacae</i>)	CR 1B.2	Found between 3,700 and 5,000 feet in elevation. Inhabits lower montane coniferous forest and meadows.	The Proposed Project area is outside of the known elevation range for the species. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. No Potential.
Mount Laguna aster (<i>Dieteria asteroides</i> var. <i>lagunensis</i>)	2.1	Found between 2,630 and 7,880 feet in elevation. Inhabits cismontane woodlands and lower montane coniferous forests.	Moderately suitable habitat is along the eastern portion of the 138 kV transmission corridor. One CNDDB occurrence is near the eastern portion of the 138 kV transmission corridor. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.
Laguna Mountains goldenbush (<i>Ericameria cuneata</i> var. <i>macrocephala</i>)	CR 1B.3	Found between 3,600 and 5,600 feet in elevation. Endemic to the Laguna Mountains, among boulders, and within crevices of granite outcrops.	The Proposed Project area is located outside of the range of the species. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. No Potential.
San Diego button-celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>)	FE CE 1B.1	Found between 50 and 1,900 feet in elevation. Inhabits San Diego Mesa hardpan, claypan vernal pool, and southern interior basalt flow vernal pools.	The Proposed Project area is outside the known elevation range for the species. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. No Potential.
Annual rock nettle (<i>Eucnide rупестris</i>)	2.2	Found between 1,500 and 1,900 feet in elevation. Inhabits Sonoran desert scrub.	The Proposed Project area is outside of the known elevation range for the species. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. No Potential.
Sticky geraea (<i>Geraea viscid</i>)	2.3	Found between 1,480 and 5,580 feet in elevation. Inhabits chaparral and disturbed areas.	Suitable habitat is present throughout the Proposed Project area. Four CNDDB occurrences are near the ECO Substation and Boulevard Substation sites and 138 kV transmission line corridor. Observed during the 2009 focused botanical surveys in various locations between proposed SP 1 and proposed SP 34 and near proposed SP 95. Present.

Species Name	Listing Status ²	Habitat Requirements	Potential to Occur
San Diego gumplant (<i>Grindelia hirsutula</i> var. <i>hallii</i>)	1B.2	Found between 570 and 5,000 feet in elevation. Inhabits meadows, valleys, foothill grasslands, chaparral, and lower montane coniferous forests.	Marginal habitat is located within the western portion of the 138 kV transmission line corridor. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.
Curly herissantia (<i>Herissantia crispa</i>)	2.3	Found between 2,200 and 2,400 feet in elevation. Inhabits Sonoran desert scrub.	Marginal habitat is located along the eastern, lower elevation portions of the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.
Laguna Mountains alumroot (<i>Heuchera brevistaminea</i>)	1B.3	Found between 4,400 and 6,500 feet in elevation. Inhabits broadleaved upland forest, chaparral, montane woodlands, and riparian scrub.	The Proposed Project area is outside of the known elevation range for the species. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. No Potential.
San Diego sunflower (<i>Hulsea californica</i>)	1B.3	Found between 3,005 and 9,565 feet in elevation. Inhabits chaparral, lower montane coniferous forests, upper montane coniferous forest openings, and burned areas.	Marginal habitat is located within the western portion of the 138 kV transmission line corridor. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.
Mexican hulsea (<i>Hulsea Mexicana</i>)	2.3	Found between 1,800 and 3,600 feet in elevation. Inhabits chaparral and volcanic soils. Occurs on burned or disturbed areas.	Marginal habitat is located within the western portion of the 138 kV transmission line corridor. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.
Slender-leaved ipomopsis (<i>Ipomopsis tenuifolia</i>)	2.3	Found between 330 and 3,940 feet in elevation. Inhabits chaparral, Sonoran desert scrub, and pinyon or juniper woodlands. Associated with gravelly or rocky areas.	Suitable habitat is present throughout the Proposed Project area. Four CNDDDB occurrences are near the ECO Substation site and the 138 kV transmission line corridor. Observed during the 2009 focused botanical surveys between proposed SP42 and proposed SP 43 and west of proposed SP 70. Present.
Robinson's pepper-grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)	1B.2	Found from sea level to 2,900 feet in elevation. Inhabits chaparral and coastal scrub.	Marginal habitat is located within the western portion of the 138 kV transmission line corridor. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.
Parish's meadowfoam (<i>Limnanthes gracilis</i> ssp. <i>parishii</i>)	CE 1B.2	Found between 1,900 and 5,300 feet in elevation. Inhabits vernal moist areas and temporary seeps of highland meadows and plateaus.	No suitable habitat is located in the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. No Potential.
Desert beauty (<i>Limnanthus bellus</i>)	2.3	Found between 3,280 and 4,595 feet in elevation. Inhabits chaparral with sandy soils	Suitable habitat is present along the 138 kV transmission line corridor and the Boulevard Substation site. Two CNDDDB occurrences are within one mile of the Proposed Project area. Observed during the 2009 focused botanical surveys west and south of proposed SP 99. Present.

Species Name	Listing Status ²	Habitat Requirements	Potential to Occur
Pygmy lotus (<i>Lotus haydonii</i>)	1B.3	Found between 1,710 and 3,940 feet in elevation. Inhabits Sonoran desert scrub, rocky areas, and pinyon or juniper woodlands.	Suitable habitat is along eastern portion of the 138 kV transmission corridor and the southern portion of the ECO Substation site. One CNDDDB occurrence is within one mile of the eastern portion of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Moderate Potential.
Mountain Springs bush lupine (<i>Lupinus excubitus</i> var. <i>medius</i>)	1B.3	Found between 1,394 and 4,495 feet in elevation. Inhabits Sonoran desert scrub and pinyon or juniper woodlands.	Suitable habitat is along the eastern portion of the 138 kV transmission corridor and the eastern portion of the ECO Substation site. Two CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Moderate Potential.
Parish's desert-thorn (<i>Lycium parishii</i>)	2.3	Found between 950 to 3,000 feet in elevation. Inhabits desert and coastal scrub.	Suitable habitat is along the eastern portion of the 138 kV transmission corridor and the eastern portion of the ECO Substation site. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Moderate Potential.
Hairy stickleaf (<i>Mentzelia hirsutissima</i>)	2.3	Found from sea level to 2,450 feet in elevation. Inhabits fans, slopes, coarse rubble, and talus slopes.	Marginal habitat is located near the ECO Substation site. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.
Creamy blazing star (<i>Mentzelia tridentate</i>)	1B.3	Found between 2,296 and 3,280 feet in elevation. Occurs in Mojave desert scrub in rocky, gravelly, and sandy soils.	Suitable habitat is along the eastern portion of the 138 kV transmission corridor and at the ECO Substation and SWPL loop-in structure sites. One CNDDDB occurrence is within one mile of the eastern portion of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Moderate Potential.
Desert spike moss (<i>Selaginella eremophila</i>)	2.2	Found between 660 and 2,955 feet in elevation. Inhabits Sonoran desert scrub in gravelly and rocky soils.	Suitable habitat is along the eastern portion of the 138 kV transmission corridor and portions of the ECO Substation and SWPL loop-in structure sites. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Moderate Potential.
Chaparral ragwort (<i>Senecio aphanactis</i>)	2.2	Found between 49 and 2,625 feet in elevation. Inhabits chaparral, cismontane woodlands, and coastal scrub.	Suitable habitat is along the eastern portion of the 138 kV transmission line corridor. One CNDDDB occurrence is within one mile of the eastern portion of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Moderate Potential.
Southern jewel-flower (<i>Streptanthus campestris</i>)	1B.3	Found between 2,955 and 7,550 feet in elevation. Inhabits chaparral, lower montane coniferous forests, rocky areas, and pinyon or juniper woodlands.	Suitable habitat is within the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Moderate Potential.
Southern mountains skullcap (<i>Scutellaria bolanderi</i> ssp. <i>austroromontana</i>)	1B.2	Found between 1,970 and 6,565 feet in elevation. Inhabits chaparral, cismontane woodlands, lower montane coniferous forests, and mesic areas.	Marginal habitat is located near the Boulevard Substation site. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Low Potential.

Species Name	Listing Status ²	Habitat Requirements	Potential to Occur
Parry's tetracoccus (<i>Tetracoccus dioicus</i>)	1B.2	Found between 545 and 3,280 feet in elevation. Inhabits chaparral and coastal scrub.	Suitable habitat is along the eastern portion of the 138 kV transmission corridor and the southern portion of the ECO Substation site. One CNDDDB occurrence is within one mile of the eastern portion of the Proposed Project area. Not observed during the 2008 general biological surveys or the 2008 and 2009 focused botanical surveys. Moderate Potential.
Invertebrates			
Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	FE	Sunny openings within chaparral and coastal sage shrublands. Host plants include dwarf plantain, desert Indianweed (<i>Plantago insularis</i>), and owl clover (<i>Orthocarpus purpurascens</i>).	USFWS-designated critical habitat is located along the 138 kV transmission line corridor approximately MP 3.5 to MP 7. Several CNDDDB occurrences are within the 138 kV transmission line corridor. One known population is located under the existing SWPL transmission line, east of Old U.S. Highway 80, near MP 6 of the proposed 138 kV transmission line corridor. Observed near proposed SP 75 during the 2009 protocol-level surveys. Present.
Amphibians			
Arroyo toad (<i>Bufo microscaphus californicus</i>)	FE CSC	Endemic to the coastal plain and mountains of central and southern California and northwest Baja California and breeds in stream channels and utilizes stream terraces and surrounding uplands for foraging and wintering.	Marginal habitat is located within small portion of the 138 kV transmission line corridor. No CNDDDB occurrences are within five miles of the Proposed Project area. Species was observed approximately 10 miles to the east of the ECO Substation site, within Imperial County. Not observed during 2008 field surveys. Low Potential.
Reptiles			
Barefooted banded gecko (<i>Coleonyx switaki</i>)	CT	Found only in areas of massive rock and rock outcrops at the heads of canyons at elevations below 2,200 feet above sea level.	Marginal habitat is located along the far eastern portion of the Proposed Project area; however, the Proposed Project site is above the species known elevation range. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. No Potential.
Northern red-diamond rattlesnake (<i>Crotalus ruber ruber</i>)	CSC	Occurs in chaparral, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains.	Suitable habitat is located throughout the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Moderate Potential.
Coast (San Diego) horned lizard (<i>Phrynosoma coronatum</i> , <i>blainvillii</i> population)	CSC	Inhabits coastal sage scrub and chaparral in arid and semi-arid climate. Prefers friable, rocky, or shallow sandy soils.	Suitable habitat is located throughout the Proposed Project area. Four CNDDDB occurrences are within the 138 kV transmission line corridor. Not observed during 2008 field surveys. High Potential.
Flat-tailed horned lizard (<i>Phrynosoma mcalli</i>)	BLMS CSC	Very limited distribution. Found in the extreme southwest corner of Arizona, southeast corner of California, and adjoining portions of Sonora and Baja California.	The Proposed Project area is outside of the historic range of the species. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.
Coast patched-nosed snake (<i>Salvadora hexalepis virgulata</i>)	CSC	Inhabits brushy or shrubby vegetation in coastal southern California. Requires small mammal burrows for refuge and overwintering sites.	Marginal habitat is located within the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.

Species Name	Listing Status ²	Habitat Requirements	Potential to Occur
Colorado Desert fringe-toed lizard (<i>Uma notata notata</i>)	BLMS CSC	Inhabits desert dunes, flats, riverbanks, and washes with loose sand and scant vegetation from sea level to 1,600 feet in elevation.	The Proposed Project area is outside of the known elevation range for the species. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. No Potential.
Birds			
Cooper's hawk (<i>Accipiter cooperii</i>)	CSC	Inhabits open, interrupted, or marginal type woodland habitats. Nests in riparian growths of deciduous trees and coast live oaks.	Suitable foraging habitat and limited nesting sites are located within the Proposed Project area. One CNDDB occurrence is within the 138 kV transmission line corridor. A pair was observed during the 2008 field surveys along the 138 kV transmission line corridor near MP 11.25. Present.
Tri-colored blackbird (<i>Agelaius tricolor</i>)	BLMS CSC	Highly colonial species that requires open water, protected nesting substrate, and foraging areas with an insect base within a few miles of the colony.	Suitable foraging habitat is located within the Proposed Project area. One CNDDB occurrence is within one mile of the 138 kV transmission line corridor. Not observed during 2008 field surveys. Moderate Potential.
Golden eagle (<i>Aquila chrysaetos</i>)	BLMS CFP	Forages over large areas of grasslands and open chaparral or sage scrub. Rare resident in San Diego County.	Suitable foraging habitat is located within the Proposed Project area. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Moderate Potential.
Western burrowing owl (<i>Athene cunicularia</i>)	BLMS CSC	Inhabits open, dry, annual or perennial grasslands, deserts, and scrubland characterized by low-growing vegetation.	Potential habitat is scattered throughout the Proposed Project area; however, species are not known to occur in the Proposed Project area and no CNDDB occurrences are within 20 miles of Proposed Project area. Not observed during 2008 field surveys. Low Potential.
California horned lark (<i>Eremophila alpestris acida</i>)	CSC	Inhabits coastal regions, chiefly from Sonoma County to San Diego County, within short-grass prairies, "bald" hills, mountain meadows, and open coastal plains.	Marginal habitat is located within the Proposed Project area. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.
Prairie falcon (<i>Falco mexicanus</i>)	CSC	Inhabits dry, open, hilly, or level terrain. Nests on cliffs.	Suitable foraging habitat is located within the Proposed Project area. Species are known to occur in the Proposed Project area; however, no CNDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Moderate Potential.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	CSC	Inhabits broken woodlands, savannah, pinyon-juniper, Joshua tree, riparian woodlands, desert oases, scrub, and washes.	Suitable habitat located within the western portion of the ECO Substation site. No CNDDB occurrences within one mile of the Proposed Project area. Not observed during 2008 field surveys. Moderate Potential.
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	FE CE	Inhabits riverine and floodplain habitats and adjacent coastal sage scrub, chaparral, or other upland plant communities.	Limited amount of marginal habitat is located within the western portion of the 138 kV transmission line corridor. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.
Gray vireo (<i>Vireo vicinior</i>)	BLMS CSC	Breeds in chaparral and pinyon-juniper woodlands in the mountains of southern California. Depends on dense stands of mature chamise or redshank.	Potential habitat is located within the western portion of the 138 kV transmission line corridor. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Moderate Potential.
Mammals			

Species Name	Listing Status ²	Habitat Requirements	Potential to Occur
Pallid bat (<i>Antrozous pallidus</i>)	CSC	Inhabits low elevation rocky arid deserts and canyon-lands, and shrub-steppe grasslands. Roosts in caves, rock crevices, mines, hollow trees, and buildings.	Marginal foraging and roosting habitat is located in the Proposed Project area. One CNDDDB occurrence is within one mile of the Proposed Project area. Not observed during 2008 field surveys. Moderate Potential.
Dulzura pocket mouse (<i>Chaetodipus californicus femoralis</i>)	CSC	Inhabits a variety of habitats including coastal scrub, chaparral, and grasslands in San Diego County.	Marginal habitat is located within the western portion of the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.
Pallid San Diego pocket mouse (<i>Chaetodipus fallax pallidus</i>)	CSC	Inhabits desert border areas in eastern San Diego County within any herbaceous areas, usually in association with rocks or coarse gravel.	Suitable habitat is located within the eastern portion of the Proposed Project area. One CNDDDB occurrence is along the eastern edge of the Proposed Project area. Not observed during 2008 field surveys. Moderate Potential.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	BLMS CSC	Found throughout California in a wide variety of habitats, but most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Extremely sensitive to human disturbance.	Marginal foraging habitat but no roosting habitat is located in the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.
Spotted bat (<i>Euderma maculatum</i>)	BLMS CSC	Inhabits a wide variety of habitats from arid deserts and grasslands through mixed conifer forest.	Marginal foraging habitat but no roosting habitat is located in the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.
Western mastiff bat (<i>Eumops perotis californicus</i>)	BLMS CSC	Inhabits many open, semi-arid to arid habitats including conifer woodlands, coastal scrub, grasslands, and chaparral.	Marginal foraging habitat but no roosting habitat is located in the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.
San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	CSC	Inhabits intermediate canopy stages of coastal sage shrub habitats in southern California.	Marginal suitable habitat is located in the western portion of the Proposed Project area. The Proposed Project area is located east of the subspecies typical range. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.
Small footed myotis (<i>Myotis ciliolabrum</i>)	BLMS	Inhabits a wide range of arid, wooded, and brushy uplands near water. Seeks cover in caves, buildings, mines, and crevices.	Marginal foraging habitat but no roosting habitat is located in the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.
California leaf-nosed bat (<i>Macrotus californicus</i>)	BLMS CSC	Inhabits desert riparian, desert wash, desert scrub, desert succulent, alkali scrub, and palm oasis habitats.	Marginal foraging habitat but no roosting habitat is located in the Proposed Project area. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Low Potential.
Long-eared myotis (<i>Myotis evotis</i>)	BLMS	Inhabits predominately coniferous forest, typical only at higher elevations from 7,000 to 8,500 feet in elevation.	Marginal foraging habitat but no roosting habitat is located in the Proposed Project area. The Proposed Project area is below the species typical elevation range. No CNDDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. No Potential.
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	CSC	Inhabits coastal scrub of southern California within moderate to dense canopies. Abundant in rock outcrops and rocky cliffs and slopes.	Suitable habitat is located within the eastern portion of the Proposed Project area. One CNDDDB occurrence is within one mile of the Proposed Project area. Not observed during 2008 field surveys. High Potential.

Species Name	Listing Status ²	Habitat Requirements	Potential to Occur
Pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	CSC	Inhabits a variety of arid areas in southern California, including piñon-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian.	Suitable habitat is located within the eastern portion of the Proposed Project area. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Moderate Potential.
Southern grasshopper mouse (<i>Oryzomys torridus ramona</i>)	CSC	Inhabits desert areas, especially scrub habitats with friable soils for digging.	Suitable habitat is located within the Proposed Project area. Three CNDDB occurrences are along the eastern portion of the Proposed Project area. Not observed during 2008 field surveys. High Potential.
Peninsular bighorn sheep (<i>Ovis Canadensis nelsoni</i>)	FE CT	Inhabits desert slopes below 4,000 feet in elevation from San Geronio Pass south into Mexico.	USFWS-designated critical habitat is located along the eastern edge of the Proposed Project area. Known populations are north of Proposed Project area. Low Potential.
Jacumba little pocket mouse (<i>Perognathus longimembris internationalis</i>)	CSC	Inhabits sandy habitats such as desert riparian, desert scrub, desert wash, and sagebrush on the desert floor. Occurs throughout east-central San Diego County south to Baja California.	Suitable habitat is located within the Proposed Project area. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. High Potential.
American badger (<i>Taxidea taxus</i>)	CSC	Inhabits in drier, open stages of most shrub, forest, and herbaceous habitats with friable soils.	Suitable habitat is located within the eastern portion of the Proposed Project area. No CNDDB occurrences are within one mile of the Proposed Project area. Not observed during 2008 field surveys. Moderate Potential.

Sticky Geraea

Sticky geraea (*Geraea viscid*) is a perennial herb in the Asteraceae family that blooms from May through June. This species inhabits chaparral and disturbed areas in southern California and Baja California, Mexico. Sticky geraea is typically found between 1,480 and 5,580 feet in elevation. Development is considered to be a threat to this species.

Four CNDDDB occurrences of sticky geraea are located within one mile of the Proposed Project area, including two north of the Boulevard Substation, one south of MP 4.0 of the 138 kV transmission line corridor, and one east of the ECO Substation and SWPL loop-in structure sites. Sticky geraea was observed during the rare plant surveys of 2009 scattered along the 138 kV transmission line corridor from proposed SP 1 through proposed SP 34 and near proposed SP 95. Suitable habitat for the species occurs scattered throughout the Proposed Project area.

Slender-Leaved Ipomopsis

Slender-leaved ipomopsis (*Ipomopsis tenuifolia*) is a perennial herb in the Polemoniaceae family that blooms from March through May. This species inhabits chaparral, pinyon-pine woodland, and desert scrub communities in Imperial and San Diego counties and Baja California, Mexico. Slender-leaved ipomopsis is typically found between 330 and 3,940 feet in elevation and is associated with rocky and gravelly areas. Development is considered to be a threat to this species.

Several CNDDDB occurrences of slender-leaved ipomopsis are located within one mile of the Proposed Project area, including one south of MP 4.0, one south of MP 2.0 of the 138 kV transmission line corridor, and one south and two north of the ECO Substation and SWPL loop-in structure sites. A population of slender-leaved ipomopsis was observed west and south of proposed SP 99 during the rare plant surveys of 2009. Suitable habitat for the species occurs throughout the Proposed Project area.

Desert Beauty

Desert beauty (*Linanthus bellus*) is an annual herb in the Polemoniaceae family that blooms from April through May. This species inhabits chaparral communities in San Diego County and Baja California, Mexico. Desert beauty is typically found between 3,280 and 4,595 feet in elevation. Development is considered to be a threat to this species.

Several CNDDDB occurrences of desert beauty are located within one mile of the Proposed Project area, including one south of MP 1.0 along the 138 kV transmission line corridor, as well as two north and two south of the Boulevard Substation. Desert beauty populations were observed during the rare plant surveys of 2009 between proposed SP 42 and proposed SP 43 and west of proposed SP 70. In addition, suitable habitat for the species occurs scattered throughout the Proposed Project area.

Pygmy Lotus

Pygmy lotus (*Lotus haydonii*) is a perennial herb in the Fabaceae family that blooms from January through June. This species inhabits Sonoran desert scrub, rocky areas, and pinyon or juniper woodlands communities in Imperial and San Diego counties and Baja California,

Mexico. Pygmy lotus is typically found between 1,710 and 3,940 feet in elevation. Threats to this species include development and grazing.

One CNDDDB occurrence of pygmy lotus is located within one mile of the Proposed Project area, south of MP 4.0. Suitable habitat for the species occurs throughout the eastern portion of the Proposed Project area. However, this species was not observed during the rare plant surveys of 2008 and 2009.

Mountain Springs Bush Lupine

Mountain Springs bush lupine (*Lupinus excubitus* var. *medius*) is a shrub in the Fabaceae family that blooms from March through May. This species inhabits Sonoran desert scrub and pinyon or juniper woodlands in Imperial and San Diego counties and Baja California, Mexico. Mountain Springs bush lupine is typically found between 1,394 and 4,495 feet in elevation. A possible threat to this species is off-road vehicle use.

Two CNDDDB occurrences of Mountain Springs bush lupine are located within one mile of the Proposed Project area, including south of MP 1.0 of the 138 kV transmission line corridor and east of the ECO Substation and SWPL loop-in structure sites. Suitable habitat for the species occurs throughout the eastern portion of the Proposed Project area. However, this species was not observed during the rare plant surveys of 2008 and 2009.

Parish's Desert-Thorn

Parish's desert-thorn (*Lycium parishii*) is a shrub in the Solanaceae family that blooms from March through April. This species inhabits desert and coastal scrub in Imperial, Riverside, San Bernardino, and San Diego counties and Sonora, Mexico. Parish's desert-thorn is typically found between 950 and 3,000 feet in elevation. A major threat to this species is development.

No CNDDDB occurrences of Parish's desert-thorn are located within one mile of the Proposed Project area. Suitable habitat for the species occurs throughout the eastern portion of the Proposed Project area. However, this species was not observed during the rare plant surveys of 2008 and 2009.

Creamy Blazing Star

Creamy blazing star (*Mentzelia tridentate*) is an annual herb in the Loasaceae family that blooms from March through May. This species inhabits desert scrub communities in Imperial, Inyo, Kern, Riverside, San Bernardino, and San Diego counties. Creamy blazing star is typically found between 2,300 and 3,300 feet in elevation and is associated with rocky, sandy, and gravelly areas. Vehicles, mining, and grazing may be threatening this species.

One CNDDDB occurrence of creamy blazing star is located approximately 1.5 miles north of the ECO Substation and SWPL loop-in structure sites. Suitable habitat for the species occurs scattered throughout the eastern portion of the Proposed Project area. However, this species was not observed during the rare plant surveys of 2008 and 2009.

Desert Spike Moss

Desert spike moss (*Selaginella eremophila*) is a rhizomatous herb in the Selaginellaceae family that blooms typically in June and less often in May and July. This species inhabits desert scrub communities in Riverside and San Diego counties and Baja California, Mexico. Desert spike moss is typically found between 660 and 2,965 feet in elevation and is associated with rocky, sandy, and gravelly areas. This species is known to be in California from fewer than 10 occurrences.

No CNDDDB occurrences of desert spike moss are located within one mile of the Proposed Project area. Suitable habitat for the species occurs throughout the ECO Substation and SWPL loop-in structure sites and within the eastern portion of the 138 kV transmission corridor. However, this species was not observed during the rare plant surveys of 2008 and 2009.

Chaparral Ragwort

Chaparral ragwort (*Senecio aphanactis*) is an annual herb in the Asteraceae family that blooms from January through April. This species inhabits chaparral, cismontane woodlands, and coastal scrub throughout coastal California. Chaparral ragwort is typically found between 49 and 2,625 feet in elevation and occasionally is associated with alkaline environments. Threats to this species include development and grazing.

One CNDDDB occurrence of chaparral ragwort is within one mile of the Proposed Project area, south of MP 4.0 of the 138 kV transmission line corridor. Suitable habitat for the species occurs scattered throughout the Proposed Project area. However, this species was not observed during the rare plant surveys of 2008 and 2009.

Southern Jewel-Flower

Southern jewel-flower (*Streptanthus campestris*) is a perennial herb in the Brassicaceae family that blooms from May through July. This species inhabits chaparral, pinyon-pine woodland, and lower montane coniferous forest communities in Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura counties and Baja California, Mexico. Southern jewel-flower is typically found between 2,955 and 7,550 feet in elevation and is associated with gravelly areas. Urban development is a threat to this species.

No CNDDDB occurrences of southern jewel-flower are located within one mile of the Proposed Project area. Suitable habitat for the species occurs scattered throughout the western portion of the Proposed Project area. However, this species was not observed during the rare plant surveys of 2008 and 2009.

Parry's Tetracoccus

Parry's tetracoccus (*Tetracoccus dioicus*) is a deciduous shrub in the Euphorbiaceae family that blooms from April through May. This species inhabits chaparral and coastal scrub communities in Orange, Riverside, and San Diego counties and Baja California, Mexico. Parry's tetracoccus is typically found between 545 and 3,280 feet in elevation. Urban development is a threat to this species.

One CNDDDB occurrence of Parry's tetracoccus is located within one mile of the Proposed Project area, south of MP 4.0 of the 138 kV transmission line corridor. Suitable habitat for the species occurs scattered throughout the western portion of the Proposed Project area. However, this species was not observed during the rare plant surveys of 2008 and 2009.

Sensitive Wildlife Species

Special-status wildlife species include those species listed by the USFWS or CDFG as endangered, threatened, proposed, or candidate species; those listed by CDFG as fully protected or species of special concern; and those listed by the BLM as sensitive. Special-status wildlife species with the potential to occur in the Proposed Project area appear in Table 4.4-1: Sensitive Species with the Potential to Occur. CNDDDB occurrences within one mile of the Proposed Project area are depicted on maps in Attachment 4.4-A: CNDDDB Occurrence Maps. The 30 special-status wildlife species with the potential to occur in the Proposed Project area include:

- one invertebrate species and one avian species that are present;
- one reptilian, and three mammalian sensitive species with a high potential to occur;
- one reptilian, five avian, and four mammalian sensitive species with a moderate potential to occur; and
- one amphibian, two reptilian, three avian, and eight mammalian sensitive species with a low potential to occur.

In addition, two reptilian species and one mammalian species were determined to have no potential to occur within the Proposed Project area. Species known to occur, species with a high or moderate potential to occur within the Proposed Project area, and the federally listed Peninsular bighorn sheep are discussed in detail as follows.

Quino Checkerspot Butterfly

The QCB is a small butterfly that currently is only found in Riverside County, San Diego County, and Baja California Norte, Mexico. The USFWS has designated 171,605 acres of critical habitat for QCB in Riverside and San Diego counties. A portion of the existing ROW for the SWPL and the proposed 138 kV transmission line from approximately MP 3.5 to MP 7.1 crosses through the Jacumba Unit of QCB critical habitat. A population was reported on the CNDDDB to occur under the SWPL transmission line near MP 6. This species is of particular concern because of its high potential to occur within the Proposed Project area.

Once widely distributed in the inland valleys and coastal plains of southern California, QCB are known to exist in a few isolated areas of southern San Diego and southwestern Riverside counties. This butterfly is found from sea level to 3,000 feet in elevation and requires open canopy scrub habitat with low-growing herbaceous annuals that include populations of the larval host plants, preferably dot-seed plantain (*Plantago erecta*). Timing and abundance of rainfall affect host plant germination, growth, and senescence which, in turn, affect the survivorship of butterfly larvae. Cool, wet weather and winter rainfall stimulate host plant germination and feeding activities. The species typically requires one year to complete a life cycle. The larvae, however, can survive long periods, possibly lasting years, in a dormant stage during dry winters or drought years. Therefore, the larval stage of the QCB may be present in areas where the host plants are not in bloom.

Protocol-level surveys for QCB were conducted at the ECO Substation and SWPL loop-in structures sites and surrounding areas in April 2008. No QCB or their host plants were observed.

Protocol-level surveys for QCB were conducted of the entire Proposed Project area, including the 138 kV transmission line corridor, in the spring of 2009. Several QCB were observed near proposed SP 75 during the 2009 protocol-level surveys. In addition, a large amount of the primary host plant for QCB, dot-seed plantain, was observed in the area of proposed SP 75. The results and associated reports were submitted to the USFWS and are included in Attachment 4.4-D: Quino Checkerspot Butterfly Survey Reports.

Northern Red-Diamond Rattlesnake

The northern red-diamond rattlesnake (*Crotalus ruber ruber*) is one of the largest rattlesnakes in the region. The longest individual on record measured a little more than five feet in length, but most individuals are approximately 2.5 feet to 3.5 feet long. This species' range extends from San Bernardino County south to Baja California Sur, Mexico. Within the northern part of its range, this rattlesnake occupies varied environments from the Pacific coastline to the desert slopes of the mountains; however, the species avoids the lower desert flats and elevations above 5,000 feet. In Baja California, it inhabits most of the peninsula, from the Pacific Ocean to the Gulf of California, including some of the Gulf islands.

No CNDDDB occurrences of northern red-diamond rattlesnake are located within one mile of the Proposed Project area. Suitable habitat for the species occurs throughout the ECO Substation and SWPL loop-in structure sites and the eastern portion of the 138 kV transmission corridor.

Coast (San Diego) Horned Lizard

The coast (San Diego) horned lizard (*Phrynosoma coronatum*, *blainvillii* population) is typically found in open coastal sage scrub, chaparral, grasslands, and juniper and oak woodlands. It is more commonly found in open, sandy washes, where it uses scattered shrubs for cover. Other requirements generally include fine, loose, sandy soils where the lizard can bury itself, an abundance of native ants as a food source, and open areas for basking.

Four CNDDDB occurrences of San Diego horned lizard are located within one mile of the Proposed Project area, including one south of MP 4 and one north of MP 9 along the 138 kV transmission line corridor, as well as one north and one south of the Boulevard Substation. Suitable habitat for the species occurs throughout the Proposed Project area.

Cooper's Hawk

Cooper's hawk (*Accipiter cooperii*) is a breeding resident throughout most of the wooded portions of California. Its preferred nesting habitat is characterized by dense stands of coast live oak, riparian, or other forest habitat near water. Breeding Cooper's hawks are widespread over San Diego County's coastal slopes, wherever stands of trees exist. This species forages on small birds and mammals in open woodlands and edge habitats.

One CNDDDB occurrence of Cooper's hawk is located within one mile of the Proposed Project area, south of MP 4.0 of the 138 kV transmission line corridor. There are known nesting locations approximately three miles east of the Proposed Project area. Suitable foraging habitat

for the species is scattered throughout the Proposed Project area and marginal nesting habitat is located along the east side of the Boulevard Substation. A pair of Cooper's hawks was observed near MP 11.25 during the field surveys.

Tri-Colored Blackbird

Basic requirements of the tri-colored blackbird (*Agelaius tricolor*) breeding sites include open accessible water, secure substrate in which to place their nests, and suitable nearby foraging areas that provide adequate food sources. Historically, most colonies were located in freshwater marshes dominated by cattails (*Typha* spp.) or tules (*Schoenoplectus* spp.).

One CNDDDB occurrence of tri-colored blackbird is located within one mile of the Proposed Project area, south of MP 4.0 of the 138 kV transmission line corridor. A nesting colony of approximately 300 birds is known to occur outside of the town of Jacumba. Foraging habitat for the species is scattered throughout the Proposed Project area; however, no nesting habitat is located within the Proposed Project area.

Golden Eagle

The golden eagle (*Aquila chrysaetos*) is a permanent resident of open, wooded areas, and is found in hilly and mountainous regions with limited human populations. This species nests on rock ledges or within large trees, including oaks and eucalyptus. Golden eagles prey on small mammals, such as rabbits and ground squirrels.

No CNDDDB occurrences of golden eagle are located within one mile of the Proposed Project area; however, suitable foraging habitat for the species occurs throughout the Proposed Project area. Potential nesting sites exist within the SWPL transmission towers ROW; historic nesting sites are located approximately three miles north of the ECO Substation and SWPL loop-in structure sites.

Prairie Falcon

Prairie falcon (*Falco mexicanus*) inhabits arid, open country in the summer, including alpine tundra, shortgrass prairie, and high desert. This species nest on the ledges of cliffs or bluffs and forages in open desert or grassland. The prairie falcon eats mostly small mammals and birds caught in flight. The species has an inland distribution in San Diego County. All known or likely nesting sites are at least 23 miles inland from the coast.

No CNDDDB occurrences of prairie falcon are located within one mile of the Proposed Project area. Suitable nesting habitat occurs east of the ECO Substation and SWPL loop-in structure sites. Marginal foraging habitat for the species is located throughout the Proposed Project area.

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is an uncommon yearlong resident in San Diego County within broken woodlands, savannah, pinyon-juniper, Joshua tree, riparian woodlands, desert oases, scrub, and washes. This species is known to nest in desert lavender (*Hyptis emoryi*), catclaw acacia, jojoba, and juniper and to feed on large invertebrates and small vertebrate species.

No CNDDDB occurrences of loggerhead shrike are located within one mile of the Proposed Project area. Suitable nesting and foraging habitat for the species occurs within the ECO Substation and SWPL loop-in structure sites and along the eastern portion of the 138 kV transmission line corridor.

Gray Vireo

The gray vireo (*Vireo vicinior*) is a rare breeding bird in San Diego County and its preferred habitat is chaparral along south-facing slopes, between 3,000 and 5,000 feet in elevation. This species often depends on dense stands of chamise and/or red shank for nesting and foraging, often building nests in chamise, scrub oak, ceanothus, and mahogany. The nearest recorded nesting site is located approximately 10 miles west of the Proposed Project area, near Buckman Springs.

No CNDDDB occurrences of gray vireo are located within one mile of the Proposed Project area. Suitable nesting and foraging habitat for the species occurs within the western portion of the 138 kV transmission line corridor.

Pallid Bat

Pallid bat (*Antrozous pallidus*) inhabits low desert shrublands, juniper woodlands, grasslands, and cottonwood-riparian zones within desert areas of eastern San Diego County and northern Baja California, Mexico.

One CNDDDB occurrence of pallid bat is located within one mile of the Proposed Project area near MP 2.5 along the proposed 138 kV transmission line. Suitable habitat for the species occurs along portions of the 138 kV transmission line.

Pallid San Diego Pocket Mouse

Pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*) inhabits chamise-red shank, mixed chaparral, desert wash, desert scrub, pinyon-juniper woodland, and annual grassland within desert border areas in eastern San Diego County and northern Baja California, Mexico.

One CNDDDB occurrence of pallid San Diego pocket mouse is located within one mile of the Proposed Project area along the eastern side of the ECO Substation and SWPL loop-in structure sites. Suitable habitat for the species occurs throughout the Proposed Project area.

San Diego Desert Woodrat

The San Diego desert woodrat (*Neotoma lepida intermedia*) occurs in coastal sage scrub and chaparral habitats within San Diego County. Woodrats make middens (nests) of twigs, sticks, cactus parts, and rocks, depending on the availability of building materials. This species forages on coast live oak, chamise, and flat-top buckwheat.

No CNDDDB occurrences of San Diego desert woodrat are located within one mile of the Proposed Project area. Suitable habitat for the species occurs within the eastern portion of the 138 kV transmission corridor and portion of the ECO Substation site. Several inactive desert

woodrat nests were observed within juniper woodland habitats throughout the Proposed Project area.

Pocketed Free-Tailed Bat

The pocketed free-tailed bat (*Nyctinomops femorosaccus*) is a species of bat in the Molossidae family and inhabits a variety of arid areas in southern California, including pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian areas. This species day-roosts in caves, crevices within cliffs, and under the roof tiles of buildings.

No CNDDDB occurrences of pocketed free-tailed bat are located within one mile of the Proposed Project area. Suitable foraging and marginal roosting habitat for the species occur within the eastern portion of the Proposed Project area.

Southern Grasshopper Mouse

The southern grasshopper mouse (*Onychomys torridus ramona*) occurs throughout desert habitats in the southwestern U.S., including dry portions of Riverside and San Diego counties and much of Mexico. This species digs its own burrow or appropriates the burrow of other small mammals and inhabits desert areas, especially scrub habitats with friable soils used for digging.

Three CNDDDB occurrences of southern grasshopper mouse are located within one mile of the Proposed Project area, including two along the eastern side of the ECO Substation and SWPL loop-in structure sites and one south of MP 4 of the 138 kV transmission line corridor. Suitable habitat for the species occurs throughout the eastern portion of the Proposed Project area.

Peninsular Bighorn Sheep

The range of Peninsular bighorn sheep (*Ovis canadensis nelsoni*) extends from the San Jacinto Mountains in Riverside County south to the U.S.-Mexico border. Most of the population lives along the east-facing slopes of the Peninsular Ranges, ranging from 300 feet to 4,000 feet in elevation, along the northwestern edge of the Sonoran Desert.

Peninsular bighorn sheep inhabit hot, dry regions of the desert that possess key habitat characteristics relating to topography, visibility, water availability, and forage quality and quantity. Alluvial fan areas are used for breeding and feeding activities, while steep topography is required for lambing and rearing habitat and for escape from predators. Lambing areas are associated with ridge benches or canyon rims adjacent to steep slopes or escarpments.

Peninsular bighorn sheep was listed by the CDFG as threatened in 1971 and by the USFWS as endangered in March 1998. In 2001, 844,897 acres of critical habitat in Imperial, Riverside, and San Diego counties was designated for the species. The eastern portion of the 498-acre area (including the sites where the ECO Substation and SWPL loop-in structures will be constructed) is located near the extreme southwestern portion of the USFWS-designated critical habitat for the species. The footprint of the ECO Substation and the SWPL loop-in structures are approximately 600 feet west of the critical habitat boundary for the Peninsular bighorn sheep.

No CNDDDB occurrences of Peninsular bighorn sheep are located within one mile of the Proposed Project area. Personnel at the Carlsbad field office of the USFWS and Dr. Robert Roy

Ramey of Wildlife Science International, Incorporated stated that there is a low possibility of Peninsular bighorn sheep to occur in the Proposed Project area; thus, bighorn sheep surveys were not recommended for the Proposed Project. The Proposed Project area is southwest and well outside of permanently occupied habitat of the Carrizo Canyon subpopulation (USFWS 1998, 2000) and is west of the In-Ko-Pah Gorge and the Interstate (I-) 8 “island” areas that receive transient bighorn sheep use. There are no historic observations of bighorn sheep by USFWS, as published in the Recovery Plan for this Distinct Vertebrate Population Segment (USFWS 2000).

On May 14, 2009, the USFWS redesignated the boundaries of the critical habitat for Peninsular bighorn sheep, reducing the size of critical habitat for the species from 844,897 acres to 376,938 acres. The area east of the Proposed Project area is still within the new critical habitat boundary.³

Jacumba Little Pocket Mouse

Habitat requirements for the Jacumba little pocket mouse (*Perognathus longimembris internationalis*) is not well understood, but the species is known to occupy sandy habitat on the desert floor. This species has been found in desert riparian, desert wash, desert scrub, and sagebrush habitats. Jacumba little pocket mouse occurs throughout east-central San Diego County south to Baja California.

No CNDDDB occurrences of Jacumba little pocket mouse are located within one mile of the Proposed Project area. However, there are documented occurrences of Jacumba little pocket mouse near the Proposed Project area, east of the town of Jacumba. Suitable habitat for the species occurs throughout the Proposed Project area.

American Badger

In California, American badgers (*Taxidea taxus*) occupy a diversity of habitats including drier, open stages of most shrub, forest, and herbaceous habitats with friable soils. The principal requirements of this badger are sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, and mountain meadows near timberline are preferred. Badgers prey primarily on burrowing rodents, such as gophers (*Thomomys* spp.), ground squirrels, and kangaroo rats (*Dipodomys* spp.).

No CNDDDB occurrences of American badger are located within one mile of the Proposed Project area. Suitable burrows were observed within the ECO Substation and SWPL loop-in structures sites. A sufficient prey base for the American badger is present throughout the Proposed Project area.

Critical Habitat

Under the FESA, to the extent prudent and determinable, the USFWS is required to designate critical habitat for endangered and threatened species (16 U.S.C. § 1533 (a)(3)). Critical habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated critical

³ Federal Register, Volume 74, Number 70

habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter.

Designated critical habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. Critical habitat designation delineates all suitable habitat, occupied or not, essential to the survival and recovery of the species.

Two USFWS-designated critical habitats are located in or near the Proposed Project area. Approximately 3.6 miles of the eastern portion of the 138 kV transmission line corridor crosses the Jacumba Unit of QCB critical habitat. Peninsular bighorn sheep critical habitat occurs approximately 600 feet east of the proposed footprint of the ECO Substation and SWPL loop-in structure sites. These areas are depicted in Figure 4.4-1: Critical Habitat Map.

Potential impacts to critical habitat within the Proposed Project area will be evaluated by the USFWS during Section 7 consultation with the BLM under the FESA.

Migration Corridors

There are no major migration corridors that cross through the Proposed Project area; however, Peninsular bighorn sheep, located north of the Proposed Project area within the San Bernardino National Forest and on Mount San Jacinto, occasionally migrate south across the international border to mate with herds in Baja California, Mexico. The Proposed Project is located at least one mile west of this migration area.

In terms of avian migration, a major route of the Pacific Flyway is located east of the Proposed Project area, with a large number of migratory birds utilizing the Salton Sea during annual migrations. It is estimated that more than 50 percent of Pacific Flyway migratory birds visit the Salton Sea region and its marshes each year. The Salton Sea is located 40 miles northeast of the Proposed Project.

Riparian Communities

There is one type of riparian community—riparian scrub—that occurs in four locations within the 138 kV transmission line corridor. This habitat type occurs near MP 7.8 and MP 11.5, which are two locations where Boundary Creek crosses the ROW; MP 8.1, which is within an unnamed drainage/wash; and near MP 3.4, which is within Carrizo Wash. These areas will be spanned and no access road or steel transmission poles will be placed within riparian scrub habitat.

Wetlands and Jurisdictional Waters

Several desert swales run east to west through the 498-acre site where the ECO Substation and SWPL loop-in structures will be constructed. Within the ECO Substation limits, numerous erosion gullies, swales, and dry washes transect the site from east to west. Three of the dry washes may potentially be waters of the U.S. and fall under the jurisdiction of the USACE and RWQCB. All three dry washes have defined bed and bank features, are at least two feet wide, display debris lines, and have connectivity to a tributary of Carrizo Creek. There are also numerous swales, washes, and intermittent creeks that are likely waters of the U.S. and state, which are located adjacent to and cross the 138 kV transmission line corridor.

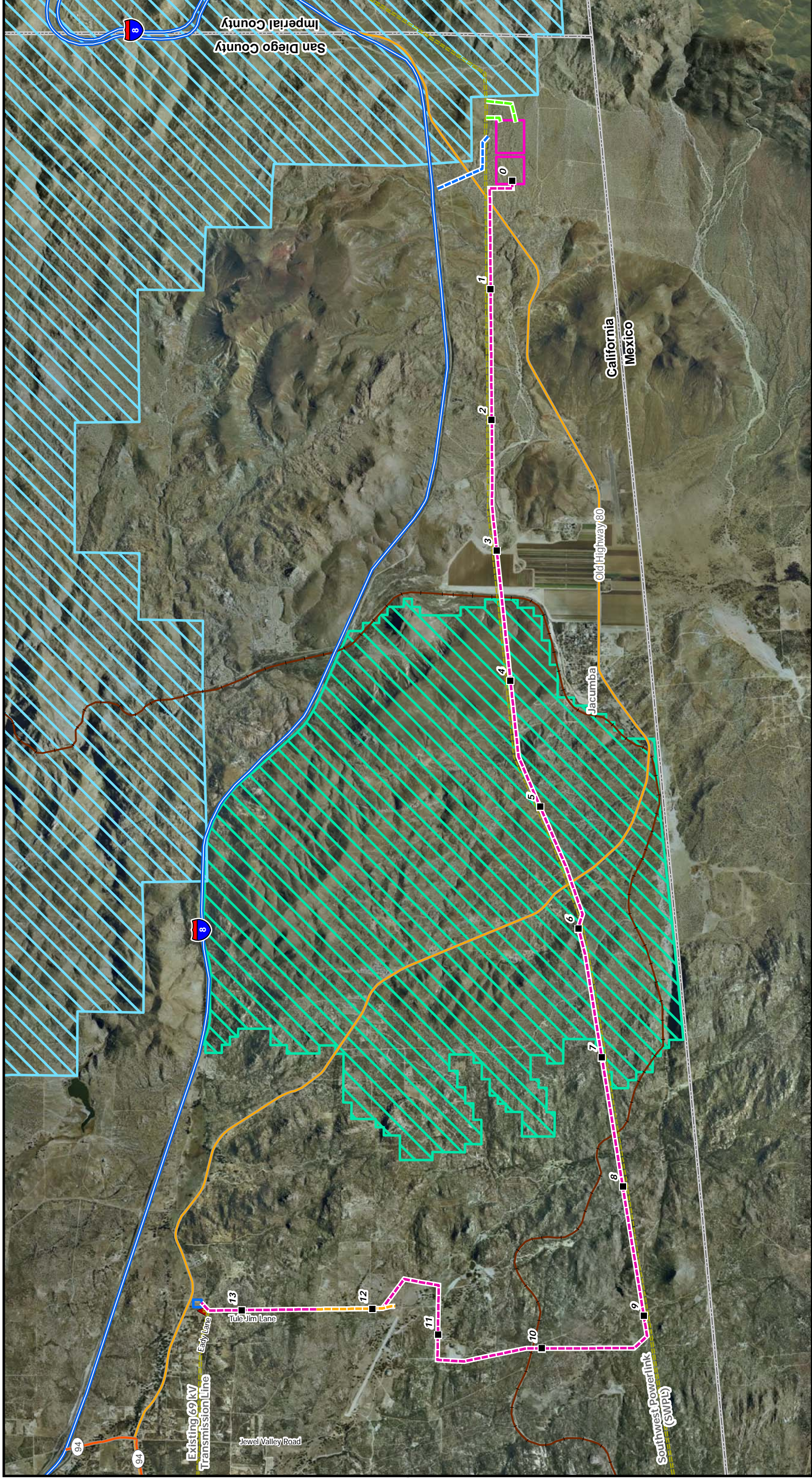


Figure 4.4-1: Critical Habitat Map

Proposed SWPL Loop-In	Peninsular Bighorn Sheep Critical Habitat	Interstate
Proposed 138 kV Line	Quino Checkerspot Butterfly Critical Habitat	Highway
Existing 69 kV Transmission Line	Proposed 12 kV Temporary Distribution Tap	Major Road
Boulevard Substation Rebuild	Existing Boulevard Substation	Railroad
Proposed 138 kV Line Milepost		

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Miles

In addition, there is a riverine feature located within Carrizo Creek near MP 2.5, two fresh emergent wetlands located at approximately MP 3.5 and MP 11.5, and a fresh water lake, Lake Domingo, near MP 10.0. All of the potentially USACE-jurisdictional areas along the transmission line alignment will be avoided and are discussed further in Section 4.8 Hydrology and Water Quality.

4.4.3 Impacts

The following discussion describes the Proposed Project's potential to impact sensitive species and habitat that may occur as a result of construction and operation of the Proposed Project. Potential impacts to biological resources are separated into those likely to occur from construction (both short- and long-term impacts) and those that may occur as a result of substation and transmission line operation and maintenance. SDG&E has designed and incorporated APMs (refer to Chapter 3 – Project Description and Section 4.4.4 Applicant-Proposed Measures) in the development of the Proposed Project to avoid or minimize potential impacts to biological resources. The APMs proposed to minimize impacts to biological resources are derived in part from SDG&E's Operational Protocols taken from the NCCP, the HCP, and past SDG&E projects.

Significance Criteria

Standards of impact significance were derived from Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Under these Guidelines, the Proposed Project may have a potentially significant impact if it will:

- 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 the CDFG or USFWS
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, or other wetland areas) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP

Direct take of a federally or state-listed species would be considered a significant impact. Temporary and/or permanent habitat loss is not considered a significant impact to sensitive species (other than for listed or candidate species under the state and federal endangered species acts) unless a significant percentage of total suitable habitat throughout the species' range is degraded or somehow made unsuitable, or areas supporting a large proportion of the species population are substantially and adversely impacted.

Potential impacts to nesting bird species would be considered significant due to their protection under the MBTA; such impacts would need to be avoided. Because the Proposed Project area has a relatively small amount of wetland and riparian features, a permanent loss of 0.5 acre of wetland or riparian features would be considered a significant impact; such impacts would need to be avoided, minimized, or compensated for.

Question 4.4a – Sensitive Species

Construction – Less-than-Significant Impact

East County Substation and Southwest Powerlink Loop-In

Sensitive Plant Species

Construction of the ECO Substation, SWPL loop-in structures, and associated access roads will affect approximately 23 acres of mixed desert scrub and 93 acres of juniper woodland. Several sensitive plant species, including, but not limited to, Mountain Springs bush lupine, sticky geraea, slender-leaved ipomopsis, desert beauty, and Jacumba milk-vetch, are known to occur or have the potential to occur in the vicinity of the ECO Substation and SWPL loop-in structure sites. The potential presence of these plant species is based on their known or recorded occurrences within the region and/or their association with the vegetation communities that occur in the vicinity of the Proposed Project area. However, rare plant surveys were conducted of the entire 498-acre site in 2008 and 2009, and no rare plant species were observed.

Because rare plant species were not detected during the focused surveys, no impacts to these species are expected. SDG&E will implement the APMs described in Section 4.4.4 Applicant-Proposed Measures to ensure protection of any unanticipated discoveries of rare plants.

Sensitive Invertebrate Species

Protocol-level surveys for the QCB were conducted within the 498-acre site where the ECO Substation and SWPL loop-in structures will be constructed. No host plants, very few nectar plants, and no QCB were found. The ECO Substation site is located outside of critical habitat for QCB. Therefore, impacts to the QCB due to the construction of the ECO Substation and SWPL loop-in structures are not anticipated.

Sensitive Reptile Species

Construction of the ECO Substation and SWPL loop-in structures will likely impact sensitive reptile species, including the northern red-diamond rattlesnake and coast San Diego horned lizard, by affecting approximately 116 acres of suitable habitat. Disturbance may be caused by the increase in vehicles and equipment noise; direct mortality by vehicles; disruption of hibernating, feeding, and breeding from increased human activity; and removal of burrows these

species often utilize. Implementation of the APMs, including preconstruction surveys and avoidance to the extent possible, as discussed in Section 4.4.4 Applicant-Proposed Measures, will reduce the impacts to these species to a less-than-significant level.

Sensitive reptile species have the potential to fall into and become trapped within the ECO Substation retention basins. However, SDG&E will implement APM-BIO-20, which requires escape ramps, in the design and construction of the ponds. Other permanent impacts from the construction of the Proposed Project will be limited because the percentage of suitable habitat that will be removed is extremely small in comparison to the total amount of available habitat for these species in the area. The surrounding area contains habitat requirements, such as burrows, nesting locations, cover, food sources, and escape cover. Therefore, permanent construction impacts will be less than significant to sensitive reptile species with the implementation of the APMs.

Sensitive Avian and Other Nesting Avian Species

Construction activities could potentially impact nesting raptors, passerines, and other sensitive bird species. Large stick nests were observed on several towers during the reconnaissance and habitat assessment surveys conducted for the Proposed Project, thus indicating a potential for nesting raptor species. Implementation of the APMs, including nesting bird surveys and avoidance to the extent possible, as discussed in Section 4.4.4 Applicant-Proposed Measures, will reduce the impacts to these nesting avian species to a less-than-significant level.

The SWPL loop-in structures will be constructed in compliance with the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines, thereby minimizing impacts to avian species. SDG&E will implement the APMs specified in Section 4.4.4 Applicant-Proposed Measures, including training, preconstruction surveys, and restrictions during the breeding season, to reduce impacts to nesting raptors and other avian species to a less-than-significant level.

Sensitive Mammal Species

All ground-disturbing activities associated with the construction of the ECO Substation and SWPL loop-in structures will occur outside of USFWS-designated critical habitat for peninsular bighorn sheep. The habitat east of the ECO Substation and SWPL loop-in structure sites is marginally suitable for peninsular bighorn sheep due to the presence of steep, rocky slopes with desert washes and swales. No known lambing areas are located south of I-8 or within five miles of the Proposed Project area. According to personnel at the USFWS Carlsbad field office and Dr. Robert Roy Ramey of the Wildlife Science International, Incorporated, the probability is very low that the species currently, or in the future, will occupy the portion of critical habitat south of I-8 and 600 feet east of the Proposed Project area. I-8 acts as a major barrier between known populations of peninsular bighorn sheep and the Proposed Project area. Therefore, no impacts to peninsular bighorn sheep are expected.

Construction activities may potentially impact other sensitive mammal species, including American badger, pallid San Diego pocket mouse, San Diego desert woodrat, pocket free-tailed bat, Jacumba little pocket mouse, and southern grasshopper mouse, if present. Potential impacts to mammal species include the temporary loss of approximately 116 acres of suitable foraging

and denning habitat, disturbance due to an increase in vehicle and equipment use, and possible direct mortality from construction vehicles and equipment. In addition, potential impacts to pallid bat include the temporary loss of approximately 116 acres of suitable foraging habitat and disturbance due to an increase in vehicle and equipment use. However, no potential roosting habitat will be impacted. SDG&E will implement the APMs listed in Section 4.4.4 Applicant-Proposed Measures, which include training, preconstruction surveys, monitoring, and agency consultation, as appropriate, to reduce potential impacts to a less-than-significant level.

Sensitive mammal species have the potential to fall into and become trapped within the ECO Substation retention basins. However, SDG&E will implement APM-BIO-20, which includes escape ramps, in the design and construction of the ponds to ensure entrapped wildlife can exit the ponds. Permanent impacts from the construction of the Proposed Project will be limited because the percentage of suitable habitat that will be removed is extremely small in comparison to the total amount of available habitat for these species in the area. The surrounding area contains habitat requirements, such as burrows, nesting locations, cover, food sources, and escape cover. Therefore, permanent construction impacts will be less than significant with the implementation of the APMs.

Critical Habitat

All ground-disturbing activities associated with construction of the ECO Substation and SWPL loop-in structures will occur outside of critical habitat for QCB and Peninsular bighorn sheep; therefore, no impacts to critical habitat for either species will occur.

Common Species

Common plant and wildlife species will be impacted by the direct removal of approximately 23 acres of mixed desert scrub and 93 acres of juniper woodland habitat during the construction of the ECO Substation, SWPL loop-in structures, and associated access roads. Several common plant species, including juniper, cholla cactus, jojoba, desert apricot, and Mormon tea, will be cleared from the sites. Plants that are not directly removed may also be impacted by the increase in dust and vehicle and foot traffic.

Table 4.4-2: Vegetation Community Temporary Impacts and Table 4.4-3: Vegetation Community Permanent Impacts provide a summary of impact acreages by vegetation community for the ECO Substation and SWPL loop-in structures, as well as the other components of the Proposed Project.

Common wildlife species, including gopher snake, granite spiny lizard, western scrub jay, phainopepla, and black-tailed jackrabbit, will be impacted through the direct removal of approximately 116 acres of suitable, mixed desert scrub and juniper woodland habitat. Disturbance may be caused by an increase in vehicles and equipment noise; direct mortality by vehicles; disruption of hibernating, feeding, and breeding from increased human activity; and removal of burrows and shrubs that these species often utilize. Implementation of the APMs, including preconstruction surveys and avoidance to the extent possible, discussed in Section 4.4.4 Applicant-Proposed Measures, will reduce the impacts to these species to the less-than-significant level.

Table 4.4-2: Vegetation Community Temporary Impacts in Acres

Proposed Project Component	Mixed Desert Scrub	Juniper Woodland	Chamise-Redshank Chaparral	Riparian Scrub	Coastal Oak Woodland	Shadscale	Fresh Emergent Wetland
ECO Substation and SWPL Loop-In	8.26	16.64	0	0	0	0	0
138 kV Transmission Line	14.20	1.45	10.19	0	0	2.7	0
Boulevard Substation	0	0	0	0	0	0	0
Total	22.46	18.09	10.19	0	0	2.7	0

Table 4.4-3: Vegetation Community Permanent Impacts in Acres

Proposed Project Component	Mixed Desert Scrub	Juniper Woodland	Chamise-Redshank Chaparral	Riparian Scrub	Coastal Oak Woodland	Shadscale	Fresh Emergent Wetland
ECO Substation and SWPL Loop-In	14.51	74.31	0	0	0	0	0
138 kV Transmission Line	2.04	0.67	1.96	0	0	0.07	0
Boulevard Substation	0	0	0	0	0	0	0
Total	16.55	74.98	1.96	0	0	0.07	0

Common wildlife species have the potential to fall into and become trapped within the ECO Substation retention basins. As previously discussed, SDG&E will implement APM-BIO-20, which includes escape ramps in the design and construction of the ponds, to ensure entrapped wildlife can exit the ponds. In addition, because vast expanses of mixed desert scrub and juniper woodlands surround the ECO Substation and SWPL loop-in structure sites, the permanent removal of approximately 91 acres will not jeopardize or significantly reduce the overall abundance of this plant community. Therefore, permanent impacts will be less than significant with the implementation of the APMs.

138 kV Transmission Line

Sensitive Plant Species

Construction of the 138 kV transmission line and associated stringing sites and fly yards will temporarily impact approximately 14.2 acres of mixed desert scrub, 1.45 acres of juniper woodland, 10.19 acres chamise-redshank chaparral, and 2.7 acres of shadscale habitats. The 138 kV transmission line and associated access roads will permanently impact a total of approximately 2.04 acres of mixed desert scrub, 0.67 acre of juniper woodland, 1.96 acres chamise-redshank chaparral, and 0.07 acre of shadscale habitats. Several sensitive plant species—including Jacumba milk-vetch, sticky geraea, desert beauty, and slender-leaved ipomopsis—are known to occur within the 138 kV transmission corridor.

With the implementation of the APMs discussed in Section 4.4.4 Applicant-Proposed Measures, including preconstruction rare plant surveys during the appropriate phenological period, flagging or fencing of sensitive plant species populations, training, and monitoring, impacts to sensitive plants along the 138 kV transmission line will be avoided or reduced to the less-than-significant level.

Sensitive Invertebrate Species

The proposed 138 kV transmission line crosses QCB critical habitat for approximately 3.6 miles (from approximate MP 3.5 to MP 7.1). The remainder of the line crosses through habitat that has either been historically occupied or has the potential for occupation by QCB and is located within an USFWS-recommended survey area for the QCB. Temporary impacts associated with the construction of the 138 kV transmission line include the use of temporary work areas around each structure, pull and tension sites, access roads, and foot traffic. A total of 4.65 acres of temporary and permanent impacts is anticipated. Potential impacts to the QCB due to Proposed Project construction activities include potential habitat loss, habitat disturbance, or species mortality during construction.

Direct impacts to the federally listed QCB and its associated habitat would constitute take under the FESA and a significant impact under the CEQA. However, SDG&E will conduct consultation under Section 7 of the FESA with the USFWS to mitigate the impacts to the QCB. SDG&E will again conduct protocol-level adult QCB flight season surveys of the entire 138 kV transmission line corridor prior to construction and will submit the 45-day QCB Survey Results Report to the USFWS and CPUC. By implementing the APMs, including relocating SP 75 out of the dense population of dot-seed plantain, preconstruction surveys, monitoring, and purchasing habitat mitigation land discussed in Section 4.4.4 Applicant-Proposed Measures, impacts to the QCB will be reduced to a less-than-significant level.

Permanent impacts associated with construction of the 138 kV transmission line include installation of transmission poles and construction of access roads. A total of approximately 1.69 acres of permanent impacts to QCB habitat will result from construction of the 138 kV transmission line. SDG&E will compensate for all permanent impacts to suitable QCB critical habitat as required by USFWS consultation, as described in Section 4.4.4 Applicant-Proposed Measures. Therefore, impacts to QCB will be reduced to a less-than-significant level through the implementation of an APM.

Sensitive Reptiles

Construction of the 138 kV transmission line will likely impact sensitive reptile species, including the northern red-diamond rattlesnake and San Diego coast horned lizard, by affecting approximately 30.5 acres of suitable habitat. Disturbance may be caused by the increase in vehicles and equipment noise; direct mortality by vehicles; disruption of hibernating, feeding, and breeding from increased human activity; and some removal of burrows that these species often utilize. Implementation of the APMs, including preconstruction surveys and avoidance to the extent possible discussed in Section 4.4.4 Applicant-Proposed Measures, will reduce the impacts to these species to a less-than-significant level.

Sensitive Bird and Other Nesting Bird Species

Activities associated with construction of the 138 kV transmission line may potentially impact nesting raptors, passerines, and other sensitive bird species. Large stick nests were observed on several towers during the reconnaissance and habitat assessment surveys conducted for the Proposed Project, thus indicating the potential for nesting raptor species. SDG&E will comply with the MBTA and implement the APMs discussed in Section 4.4.4 Applicant-Proposed Measures, including nesting bird surveys and nesting season restrictions, to reduce impacts to breeding and nesting raptors and other avian species to a less-than-significant level.

Transmission lines and other structures provide potential perching opportunities for raptor species, which can increase the potential for predation of wildlife by raptors. In areas where current perching sites are few or rare, the construction of a new transmission line and other tall structures may increase the potential for raptor perching and hence, predation opportunities in the area.

Because the majority of the 138 kV transmission line will generally parallel the existing SWPL 500 kV transmission line, the installation of new steel poles will not significantly increase perching opportunities for raptors in the area. Furthermore, because all of the new support structures being installed by SDG&E for the Proposed Project are steel poles, which provide less suitable perching platforms than lattice structures, the Proposed Project will not significantly increase raptor perching opportunities.

Concerns regarding potential electrocution impacts to wildlife are primarily focused on avian species. Electrocutions with avian species can occur from the three following events:

- phase to phase contact when a bird that is perched, landing, or taking off from a utility pole cross-arm comes into contact with two conductors completing an electrical circuit;
- simultaneous contact with energized phase conductors and other equipment; and
- simultaneous contact with an energized wire and a grounded wire or other grounded device or neutral wire.

Most bird electrocutions occur on distribution systems at relatively lower voltages. This is due primarily to the spacing of the electrical conductors. On transmission poles, the wires are separated by eight to 30 feet. In distribution systems, the spacing is two to six feet. The closer

spacing is more of a potential hazard to raptors and other large birds because their body size and wingspan are large enough to span the distance between the conductor wires, completing the electrical circuit.

The basic approach to minimize electrocutions is twofold—isolation and insulation. The term isolation refers to providing a minimum separation of 60 inches between the phase conductors or a phase conductor and grounded hardware/conductor. The term insulation refers to covering phases or grounds where adequate separation is not feasible. The 138 kV transmission line will be constructed with energized components (conductors) and grounding structures in excess of eight feet apart, effectively preventing most local or migratory bird species from extending their maximum wingspan to simultaneously contact a positive conductor and a ground wire to complete the electrical circuit. Additionally, SDG&E will ensure that the 138 kV transmission structures are spatially configured and designed in accordance with the Avian Power Line Interaction Committee’s Suggested Practices for Avian Protection on Power Lines in order to minimize the potential for avian electrocutions. Therefore, the potential impacts of increased wildlife electrocution are anticipated to be less than significant.

Collision impacts of avian species with existing transmission facilities can be a significant impact. Collision impacts typically occur to migratory bird species and are generally due to poor visibility of electrical lines. Factors leading to avian collisions with existing transmission lines include a lack of visual cues that make the lines stand out against the surrounding environment. Disorientation of avian species can be caused by “light dazzle” from city/industrial light sources during evening hours, by spatial configuration of the electrical lines, and proximity to heavily used major avian flyways. The Proposed Project is not located within a major flyway for migratory birds and is not located proximate to a significant light dazzle source; thus, collision impacts to avian species are anticipated to be less than significant.

Sensitive Mammal Species

Activities associated with the construction of the 138 kV transmission line may potentially impact sensitive mammal species, including American badger, pallid San Diego pocket mouse, San Diego desert woodrat, Jacumba little pocket mouse, and southern grasshopper mouse, if present. Potential impacts to sensitive mammal species include the temporary loss of approximately 26 acres of suitable foraging and denning habitat, disturbance due to an increase in vehicle and equipment use, and possible direct mortality from construction vehicles and equipment. In addition, potential impacts to the pallid bat include the temporary loss of approximately 26 acres of suitable foraging habitat and disturbance due to an increase in vehicle and equipment use. However, no potential roosting habitat will be impacted. SDG&E will implement the APMs discussed in Section 4.4.4 Applicant-Proposed Measures, including preconstruction surveys, training, and monitoring, to reduce potential impacts to sensitive mammalian species to a less-than-significant level.

Potential impacts to sensitive mammal species include the permanent loss of approximately 4.5 acres of suitable foraging, nesting, and denning habitat due to the installation of transmission poles and construction of access roads. Because vast expanses of suitable habitat surround the Proposed Project area, permanent removal of approximately 4.5 acres will not jeopardize or

significantly reduce the overall abundance of suitable habitat for these species. Therefore, impacts will be less than significant.

Critical Habitat

As discussed in the temporary construction impacts to the QCB, the proposed 138 kV transmission line corridor crosses critical habitat for the QCB for approximately 3.74 miles, as well as other habitat that has either been historically occupied or has the potential for occupation by the QCB. Approximately 2.96 acres of critical habitat will be temporarily impacted during construction of the transmission line. Temporary impacts will include the clearing, grading, and use of temporary work areas around each structure, pull and tension sites, laydown yards, temporary access roads, and foot traffic. Approximately 1.69 acres of critical habitat will be permanently impacted by the construction of the 138 kV transmission line. As discussed previously, with the implementation of the APMs discussed in Section 4.4.4 Applicant-Proposed Measures, which include compensation, surveying, training, and monitoring, impacts to QCB critical habitat will be reduced to a less-than-significant level.

Common Species

Common plant and wildlife species will be impacted by the direct removal of approximately 16.25 acres of mixed desert scrub, 2.12 acres of juniper woodland, 12.15 acres chamise-redshank chaparral, and 2.77 acres of shadscale habitats during the construction of the 138 kV transmission line and associated access roads. Several common plant species, including juniper, cholla cactus, jojoba, desert apricot, chamise, redshank, water jacket, catclaw acacia, sugar bush, flat-top buckwheat, salt bush, and Mormon tea, will be cleared from the sites. Plants that are not directly removed may also be impacted by the increase in dust and vehicle and foot traffic. Table 4.4-2: Vegetation Community Temporary Impacts and Table 4.4-3: Vegetation Community Permanent Impacts provide a summary of impact acreages by vegetation community for the 138 kV transmission line, as well as the other components of the Proposed Project.

Common wildlife species, including gopher snake, red coachwhip, granite spiny lizard, western fence lizard, western scrub jay, Bewick's wren, phainopepla, mourning dove, horned lark, California thrasher, black-throated sparrow, antelope ground squirrel, black-tailed jackrabbit, and coyote, will be impacted through the direct removal of approximately 33.29 acres of suitable habitat. Disturbance may be caused by an increase in vehicles and equipment noise; direct mortality by vehicles; disruption of hibernating, feeding, and breeding from increased human activity; and removal of burrows and shrubs that these species often utilize. Implementation of the APMs, including preconstruction surveys and avoidance to the extent practical discussed in Section 4.4.4 Applicant-Proposed Measures, will reduce the impacts to these species to a less-than-significant level.

Because vast expanses of mixed desert scrub, juniper woodlands, chamise-redshank chaparral, and shadscale surround the Proposed Project area; the temporary and permanent removal of approximately 33.29 acres will not jeopardize or significantly reduce the overall abundance of these plant communities. There will be no impacts to fresh emergent wetland, coastal oak woodland, and riparian scrub habitats. Therefore, impacts will be less than significant.

Boulevard Substation

Sensitive Plant Species

Rebuilding the Boulevard Substation will not impact any natural plant communities because the site is currently a residential area. Four oak trees will be removed or trimmed during the rebuilding of the substation and to allow for the connection of the 138 kV transmission line into the rebuilt Boulevard Substation. However, all disturbed terrain at the Boulevard Substation site will be restored through recontouring, revegetation, and landscaping in accordance with the Landscaping Plan, including the planting of oak trees to replace all trees that were removed during construction. Rare plant surveys were conducted of the entire area surrounding the existing site and several specimens of Jacumba milk-vetch were observed.

With the implementation of the APMs discussed in Section 4.4.4 Applicant-Proposed Measures, including preconstruction rare plant surveys during the appropriate phenological period, flagging or fencing of sensitive plant species populations, salvage, training, and monitoring, impacts to sensitive plants along the 138 kV transmission line will be avoided or reduced to the less-than-significant level.

Sensitive Invertebrate Species

Rebuilding the Boulevard Substation will occur outside of critical habitat for the QCB. The rebuild area is classified as unsuitable for the species because it is a disturbed, residential area. Therefore, no impact will occur to the QCB due to the rebuild of the Boulevard Substation.

Sensitive Reptiles

Rebuilding the Boulevard Substation will not impact any natural plant communities because the site is currently a residential area and therefore will not likely impact sensitive reptile species.

Sensitive Bird and Other Nesting Bird Species

Rebuilding the Boulevard Substation may potentially impact nesting raptors, passerines, and other sensitive bird species by the removal of a few mature oak trees. SDG&E will comply with the MBTA and implement the APMs discussed in Section 4.4.4 Applicant-Proposed Measures, including preconstruction surveys and breeding season work restrictions, to reduce impacts to a less-than-significant level.

Permanent impacts will be limited because the percentage of suitable habitat that will be removed is extremely small in comparison to the total amount of available habitat for these species in the area. The surrounding area contains habitat requirements, such as nest sites, cover, food sources, and escape cover. Therefore, permanent construction impacts to sensitive birds and other nesting bird species will be less than significant. Because the Boulevard Substation work involves the rebuild of an existing facility, the extent of predation on sensitive species or common species is not anticipated to change from existing conditions. In addition, the newly installed structures will be designed to minimize perching potential for avian species.

Sensitive Mammal Species

Rebuilding the Boulevard Substation will not impact any natural plant communities because the site is currently a residential area. Similarly, the substation rebuild will not likely impact any sensitive mammal species.

Critical Habitat

Rebuilding the Boulevard Substation will not impact USFWS-designated critical habitat because none occurs within or near the site.

Common Species

Rebuilding the Boulevard Substation will not impact any natural plant communities because the site is currently a residential area. Similarly, no impacts to common wildlife species are likely to result.

Operation and Maintenance – Less-Than-Significant Impact

Standard operation and maintenance activities, such as road grading, tree trimming, structure installation, replacement, and repairs, may potentially impact sensitive, listed, and covered species if they are present in the Proposed Project area. Operation and maintenance work for the substations will primarily occur within the substation fence lines. Because SDG&E operates existing facilities in the area, increased vehicle trips and activities will result in a minimal increase in the potential to impact species and habitat. In addition, SDG&E will utilize their existing HCP for QCB during all routine operation and maintenance activities for the Proposed Project. Thus, potential operation and maintenance impacts will be less than significant.

Question 4.4b – Sensitive Natural Communities – No Impact

Sensitive natural communities include riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or designated by the CDFG and USFWS. Two sensitive natural communities exist in the Proposed Project area—riparian scrub and fresh emergent wetland; however, these communities will be avoided. Only four plant communities—chamise-redshank chaparral, juniper woodland, shadscale, and mixed desert scrub—will be impacted by the Proposed Project, as previously described under the response to Question 4.4a and detailed in Table 4.4-2: Vegetation Community Temporary Impacts and Table 4.4-3: Vegetation Community Permanent Impacts.

Question 4.4c – Effects on Wetlands – Less-than-Significant Impact

No wetlands as defined by Section 404 of the CWA are found within the ECO Substation, SWPL loop-in, or Boulevard Substation sites. Construction of the ECO Substation will permanently fill three small desert swales that are considered to be waters of the U.S. based on sheet flow connectivity to other jurisdictional drainages, as well as sheet flow across international borders. A total of approximately 0.5 acre of waters of the U.S. will be permanently filled during construction of the ECO Substation. Impacts to these swales may also be regulated by the CDFG and RWQCB. In order to mitigate for impacts to waters of the U.S. and state, SDG&E will work closely with the USACE, RWQCB, and CDFG to obtain the appropriate permits and to ensure that adequate compensation for these losses is achieved. As described in Section 4.8.4

Applicant-Proposed Measures in Section 4.8 Hydrology and Water Quality, SDG&E plans to mitigate for this loss at a one to one ratio. With the implementation of APM-HYD-01, impacts to waters of the U.S. and state resulting from the construction of the ECO Substation will be less than significant.

The 138 kV transmission line will cross several waters of the U.S.; however, all impacts will be avoided to these waters by constructing access roads and pole sites within upland locations. No direct impacts to waters of the U.S. will occur.

Likewise, all operation and maintenance activities will avoid any jurisdictional areas, as they will be conducted in previously disturbed areas.

Question 4.4d – Interfere with Native Wildlife Movement – *Less-than-Significant Impact*

The construction of the Proposed Project will not interfere with the movement of any native wildlife species or interfere with known migration corridors. The Proposed Project is situated just south of a major wildlife movement barrier (I-8) and the disturbance of approximately 113 acres will not significantly impede potential wildlife movement in the north/south direction. No known migration corridors and no waterways that contain fish are in the Proposed Project area. While vehicle traffic associated with Proposed Project construction or operation may result in species injury or mortality, impacts will be less than significant due to the low likelihood of these collisions occurring and the fact that the potential for this to occur already exists in the Proposed Project area due to the existing network of roads. Transmission corridors are often utilized by wildlife as travel corridors; therefore, the 138 kV transmission line will not impede wildlife movement.

Question 4.4e – Conflict with Local Policies – *No Impact*

Construction and operation and maintenance of the Proposed Project will not conflict with any local environmental policies or ordinances promulgated to protect biological resources, as discussed below.

- *Policy 5: San Diego County shall encourage the use of native plant species in review of landscaping and erosion control plans for public and private projects.*

The Proposed Project will incorporate the use of native plant species for landscaping and erosion control purposes for all Proposed Project components. Therefore, the Proposed Project is consistent with this measure.

- *Policy 6: If a project is determined to have significant adverse impacts on plants or wildlife, an acceptable mitigating measure may be voluntary donation of land or monies for acquisition of land of comparable value to wildlife.*

Direct impacts to the federally listed QCB and its associated habitat would constitute a take under the FESA and a significant impact under the CEQA. SDG&E will consult with the USFWS under Section 7 of the FESA to mitigate for impacts to federally listed species. SDG&E will conduct protocol-level, adult QCB flight season surveys of the entire 138 kV transmission line corridor in 2010 and will submit the 45-day QCB Survey

Results Report to the USFWS and the CPUC. SDG&E will mitigate for any permanent impacts to suitable QCB critical habitat at a two to one ratio. Therefore, the Proposed Project is consistent with this policy.

- *Policy 9: When significant adverse habitat modification is unavoidable, San Diego County will encourage project designers to provide mitigating measures in their design to protect existing habitat.*

With the implementation of the APMs described in Section 4.4.4 Applicant-Proposed Measures, SDG&E will minimize and mitigate for unavoidable modification to habitat to the maximum extent feasible for all components of the Proposed Project. Therefore, the Proposed Project is consistent with this policy.

- *Policy 16: The County will regulate major land-clearing projects to minimize significant soil erosion; destruction of archaeological, historic, and scientific resources; and endangered species of plants and animals.*

SDG&E will obtain all applicable ministerial permits from San Diego County for the Proposed Project to ensure that destruction of archaeological, historic, and scientific resources and impacts to soil erosion and endangered plants and animals are minimized and in compliance with San Diego County regulations. Further, SDG&E's APMs address the potential to affect these resources and ensure impacts will be minimized to the extent possible. Therefore, the Proposed Project is consistent with this policy.

No other local ordinances protecting biological resources have been identified.

Question 4.4f – Conflict with Conservation Plan – No Impact

SDG&E's existing NCCP and HCP are the only two conservations plans that may apply to the Proposed Project area; however, due to the size of the Proposed Project, these plans will not be utilized. The APMs that will be implemented as part of the Proposed Project will be consistent with the operation protocols in the NCCP and HCP. Additionally, SDG&E will generally follow the habitat enhancement and reclamation measures described within the NCCP and HCP in order to reduce impacts to biological resources to a less-than-significant level. Therefore, the Proposed Project will not conflict with any applicable conservation plan.

4.4.4 Applicant-Proposed Measures

SDG&E has designed and incorporated the following APMs into the Proposed Project to avoid or minimize potential impacts to biological resources:

- APM-BIO-01: Littering will not be allowed. Food-related garbage and trash will be removed from the Project area daily.
- APM-BIO-02: Smoking will only be allowed in cleared areas or enclosed vehicles to reduce the potential for wildfires.

- APM-BIO-03: All earth-moving equipment will be confirmed to be clean and free of mud and vegetative material before first arriving at the construction site. If the equipment leaves the Project site, it must be confirmed to be clean and free of mud and vegetative material prior to re-entering the site.
- APM-BIO-04: Firearms will be prohibited in all Project areas.
- APM-BIO-05: Project personnel will not be allowed to bring pets to any Project area to minimize harassment or killing of wildlife and to prevent the introduction of destructive animal diseases to native wildlife populations.
- APM-BIO-06: No harm, harassment, or collection of plant and wildlife species will be allowed. Feeding of wildlife will be prohibited.
- APM-BIO-07: A biological monitor will be present during all ground-disturbing and vegetation removal activities. Immediately prior to initial ground-disturbing activities and/or vegetation removal, the biological monitor will survey the site to ensure that no sensitive species will be impacted.
- APM-BIO-08: Prior to construction, all SDG&E, contractor, and subcontractor Project personnel will receive training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including appropriate wildlife avoidance; impact minimization procedures; the importance of these resources, and the purpose and necessity of protecting them; and methods for protecting sensitive ecological resources. The training will include best management practices to reduce the potential for erosion and sedimentation during construction of the Project.
- APM-BIO-09: Survey personnel will keep survey vehicles on existing roads. During Project surveying activities, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat will require prior approval from the Project biological monitor. Hiking off roads or paths for survey data collection will be allowed year-round as long as all of the other applicable APMs are met.
- APM-BIO-10: Except when not feasible due to physical or safety constraints, all Project vehicle movement will be restricted to existing access roads and access roads constructed as a part of the Project and determined and marked by SDG&E in advance of construction. Approval from a biological monitor will be obtained prior to any travel off of existing access roads.
- APM-BIO-11: To the extent feasible, access roads will be built at right angles to streambeds and washes. Where it is not feasible for access roads to cross at right angles, SDG&E will limit roads constructed parallel to streambeds or washes to a maximum length of 500 feet at any one transmission line crossing location. Such parallel roads will be constructed in a manner that minimizes potential adverse impacts on waters of the U.S. or state-only waters. All access roads constructed parallel to or across these features will be approved by a biological monitor in advance.

- APM-BIO-12: Prior to construction of the 138 kV transmission line, surveys for sensitive plant species known to occur or with a moderate to high potential to occur within the Project area, as described in Chapter 4.4 Biological Resources, will be conducted for work areas and access roads during the appropriate phenological period. A report will be prepared that reflects the finding of these surveys and any associated impacts that would result from construction of the transmission line. This report will be submitted to the CPUC prior to the start of construction.
- APM-BIO-13: Prior to the start of construction, the boundaries of plant populations designated as sensitive by the USFWS or CDFG, and other resources designated sensitive by SDG&E and the resource agencies, will be delineated with clearly visible flagging or fencing. The flagging and/or fencing will be maintained in place for the duration of construction. Flagged and fenced areas will be avoided to the extent practicable during construction activities in that area.
- APM-BIO-14: If impacts to sensitive plant species are unavoidable, SDG&E will work with the appropriate jurisdictional agency (when practicable) to salvage the plant individuals utilizing methods, including removal and stockpiling for replanting on site, removal and transplanting out of surface disturbance area, or removal and salvage by an appropriate resource specialist.
- APM-BIO-15: SDG&E will conduct protocol-level surveys for QCB (*Euphydryas editha quino*) prior to construction. Once the surveys have been completed, a 45-day report will be submitted to the USFWS and CPUC.
- APM-BIO-16: SDG&E will work with Project engineers to relocate, if feasible, proposed SP 75 to avoid dense populations of any primary host plant of the QCB.
- APM-BIO-17: SDG&E will compensate for permanent impacts to suitable QCB critical habitat at a ratio of one to one or as agreed to in consultation with the USFWS.
- APM-BIO-18: SDG&E will compensate for permanent impacts to sensitive species habitat at a ratio of one to one or as agreed to in consultation with the USFWS and CDFG.
- APM-BIO-19: All steep-walled trenches or excavations used during construction will be inspected twice daily (early morning and evening) to protect against wildlife entrapment. Open construction holes will be covered overnight. Covers will be secured in place nightly, prior to workers leaving the site, and will be strong enough to prevent livestock or wildlife from falling into the hole. Holes and/or trenches will be inspected prior to filling to ensure the absence of mammals and reptiles. Excavations will be sloped on one end to provide an escape route for small mammals and reptiles. If wildlife is located in the trench or excavation and cannot escape unimpeded, the biological monitor will be called immediately to remove them. The biological monitor will make the required contacts with USFWS and CDFG resource personnel and obtain verbal approval prior to removing any entrapped protected wildlife species. If the biological monitor is not qualified to remove the entrapped wildlife, a recognized wildlife rescue agency (such as

Project Wildlife) will be employed to remove the wildlife and transport them safely to other suitable habitats.

- APM-BIO-20: Permanent retention basins will be constructed with escape ramps along two sides of the pond to allow entrapped wildlife to escape. The slope of the ramps will not exceed a two to one ratio and will be constructed of non-slippery material, or as specified by the biological monitor.
- APM-BIO-21: If feasible, SDG&E will avoid construction during the nesting or breeding season. When it is not feasible to avoid construction during the nesting or breeding season, SDG&E will perform a site survey in the area where the work is to occur. This survey will be performed to determine the presence or absence of nesting birds or other species in the work area. If an active nest is identified, a biological monitor will monitor the nest and determine a suitable construction buffer to ensure that the birds are not disturbed. If the birds are federal or state-listed species, SDG&E will consult with the USFWS and CDFG as necessary to determine the construction buffer. Monitoring of the nest will continue until the birds have fledged.
- APM-BIO-22: Prior to construction, SDG&E will remove all existing raptor nests from existing structures that will be affected by Project construction. Removal of nests will occur outside of the raptor breeding season (January to July). If it is necessary to remove an existing raptor nest during the breeding season, a qualified biologist will survey the nest prior to removal to determine if it is active. If the nest is inactive, it will be dismantled and removed from the site promptly under the supervision of a biological monitor. If the nest is determined to be active, it will not be removed and the biological monitor will monitor the nest to ensure nesting activities and/or breeding activities are not disrupted. If the biological monitor determines that Project activities are disturbing or disrupting nesting activities, the monitor will make recommendations to reduce the noise and/or disturbance in the vicinity of the nest.
- APM-BIO-23: Construction night lighting in sensitive habitats will be minimized to the extent feasible. Exterior lighting within the Project area and adjacent to undisturbed habitat will be the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from preserved habitat to the maximum extent practicable.
- APM-BIO-24: Nighttime vehicle traffic volume associated with Project activities will be kept to a minimum and speeds will be limited to 10 miles per hour to prevent mortality of nocturnal wildlife species.
- APM-BIO-25: Structures will be constructed to conform to the Avian Power Line Interaction Committee's *Suggested Practices for Avian Protection on Power Lines* to help minimize impacts to raptors.
- APM-BIO-26: At the completion of the Project, all construction materials will be removed from the site.

- APM-BIO-27: All new access roads constructed as part of the Project that are not required as permanent access for future Project operation and maintenance will either be restored or permanently closed. Where required, roads will be permanently closed using the most effective feasible and least environmentally-damaging methods appropriate to that area (e.g., stockpiling and replacing topsoil or replacing rock), with the concurrence of the underlying landowner and the governmental agency having jurisdiction.
- APM-BIO-28: Topsoil located in areas to be restored will be conserved during excavation and reused as cover on disturbed areas to facilitate regrowth of vegetation. Topsoil located in developed or disturbed areas is excluded from this APM.
- APM-BIO-29: Wherever possible, vegetation will be left in place to avoid excessive root damage and to allow for resprouting.
- APM-BIO-30: Temporarily disturbed areas will be reseeded with an appropriate seed mix that does not contain invasive, non-native plant species in accordance with landowner approval.

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