B.3.4 Biological Resources

BIOLOGICAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	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 U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☒	☐	☐

Significance criteria established by CEQA Guidelines, Appendix G.

B.3.4.1 Setting

This section describes the biological resources that occur, or could potentially occur, in the Project area. It includes a description of the existing biotic environment, including common plants and wildlife, sensitive habitats, special-status species and their locations in relation to the Proposed Project. The following section (B.3.4.2) presents an analysis of potential impacts to biological resources and, where necessary, specifies mitigation measures to reduce potential impacts to less-than-significant levels. Information used in preparing this section was derived from:

- Proponent's Environmental Assessment for the Downs Substation Project (SCE, 2010);
- Biological Resources Technical Report for the Proposed Fiber Optic Line Installation on the Existing Inyokern-McGen-Searles Transmission Line, Kern and San Bernardino Counties, California (SCE, 2010);
- Biological Resources Technical Report for the Proposed Downs Substation Expansion Site, Ridgecrest, Kern County, California (SCE, 2010);
- Downs Substation Proposed Project 115 kV Route Scoping Survey Memo Report (SCE, 2011a);
- Sensitive Species Surveys on the Proposed Downs Substation Project, Kern and San Bernardino Counties, California (SCE, 2011b; 2011c);
- Records of sensitive species locations from the California Natural Diversity Database (CDFG, 2011);
- Records of sensitive species locations from the California Native Plant Society Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2011); and,

- Relevant Biological Technical Reports that have been completed for the Ridgecrest area.

The Proposed Project is located within two minor physiographic regions of south-central California. Portions of the Proposed Project west of Poison Canyon on Highway 178 are located within the east-central Indian Wells Valley physiographic region. The Indian Wells Valley is bounded on the west by the Sierra Nevada Range, on the south by the El Paso Mountains, on the north by the Coso Range, and on the east by the Argus Range. Portions of the Proposed Project within and east of Poison Canyon are located in the northwestern Searles Valley physiographic region. The Searles Valley is bounded by the Argus Range on the west, the Slate Range on the north and east, and the Summit Range and Lava Mountains on the south. The floor of the Indian Wells Valley slopes gently toward China Lake and to the northwest of the Proposed Project area. The floor of the Searles Valley slopes east from the Proposed Project area near Trona to Searles Lake. Poison Canyon connects the two valleys and drains eastward into Searles Valley.

The Project area consists of three general sites where activities would occur. These include the Downs Substation expansion site, the existing Inyokern-McGen-Searles subtransmission line site (which would support activities associated with installation of new fiber optic telecommunications line), and six subtransmission pole replacement sites.

The existing Downs Substation consists of a fenced and developed parcel that encompasses approximately one acre of land. The proposed expansion of Downs Substation would require an additional 2.5 acres of a 4.6-acre parcel of SCE-owned land adjacent to the existing Downs Substation located in the northwest quarter of the city of Ridgecrest, California at the southwest corner of Downs Street and Ridgecrest Boulevard. The expansion site is in Kern County and is found on the U.S. Geological Survey (USGS) Ridgecrest South 7.5 minute quadrangle map in the northeast quarter of Township 27 South, Range 40 East, Section 5. Elevations at this site range from approximately 2,320 to 2,340 feet above mean sea level (amsl). The proposed substation expansion site is currently enclosed by six-foot high chain link fencing and supports both disturbed and natural plant communities. Due to the proximity of the site to residential and urban development, portions of the proposed substation showed signs of past anthropogenic disturbance including bicycle trails, footpaths, and off-highway vehicle tracks. Litter and various debris piles consisting of construction waste (e.g., tile, broken concrete, and lumber) occur intermittingly across the site. Generally the substation expansion area supports habitat for the desert tortoise. However, habitat in the Ridgecrest area has been compromised in many areas; urban and residential development in the region have left a patchwork of native habitat within a highly developed area supporting roads, culverts, single family homes, ball fields, and light industrial uses. While it is not impossible that remnant populations of tortoise occur in the area, the likelihood of this species occurring on the Project site is extremely low. Because of the existing anthropogenic disturbance on the site and in the region the Downs Substation expansion site is not expected to support desert tortoise,~~This area appears to lack suitable habitat for~~ Mojave ground squirrel (MGS), ~~and for~~or any highly sensitive plant species.

The existing Inyokern-McGen-Searles subtransmission line site currently covers approximately 58 miles and loops through the Downs, Searles, McGen, and Inyokern Substations. The Project area covers portions of ten USGS 7.5 minute quadrangles (Inyokern, Inyokern SE, Ridgecrest South, Ridgecrest North, Lone Butte, Spangler Hills West, Spangler Hills East, West End, Trona East, and Trona West) and several townships, ranges, and sections. Elevations for the entire existing utility corridor range from approximately 1,650 feet to 2,600 feet amsl. Habitat conditions vary by location along the alignment and range from disturbed habitat located in urbanized areas to pure stands of native vegetation. A concise description of the habitat conditions that occur are presented below.

Existing Inyokern-McGen-Searles No. 1 115-kV Subtransmission Line Between the Inyokern Substation and McGen Substation

The right of way in this segment travels through naturally vegetated natural lands located along existing utility rights of way west and east of Ridgecrest; portions of scattered residential lands within the cities of Ridgecrest, Trona, and Argus; and natural lands in Poison Canyon and Searles Lake. This section of the line includes large expanses of native desert scrub communities, isolated rural residences, commercial areas, and more heavily developed areas near Searles Lake. This route also traverses areas of complex topography associated with portions of Poison Canyon. Large rock outcrops, incised channels, and sand ramps occur in portions of this alignment.

South of the Inyokern Substation up to Highway 395 the alignment is located primarily in natural lands supporting intact creosote bush scrub. A few private residences are scattered in this area. Small burrows are common along the alignment and native vegetation is present at most of the tower sites. In one location, a large mammal burrow abuts the access road. Natural lands in this area could support a variety of species including desert tortoise, MGS, and burrowing owl.

East of Highway 395 the alignment continues for approximately two miles through good quality natural lands and sparse rural residences. Soil conditions in this section change from sand dominated to more cobble like as the alignment passes several broad washes. Between Jack Ranch Road and San Bernardino Road the alignment occurs in a mix of residential and natural lands. Habitat quality in this section varies by location; however, natural lands could support a variety of species including desert tortoise, MGS, and burrowing owl.

East of San Bernardino Road the right of way transitions to open desert supporting primarily undisturbed creosote bush scrub. A number of small washes occur in this area and the topography becomes more complex as the alignment enters Poison Canyon. Habitat conditions in this area are suitable for desert tortoise, MGS, and burrowing owl. Near a small rock promontory the carapace of a desert tortoise was found during the 2012 surveys. This area is approximately 300 feet north of the right of way and 0.5 miles west of Milford Road. Access to the towers in this section is available in most locations; however, there are a number of towers with limited access.

East of Milford Road the elevation continues to increase and the alignment consists of gently rolling hills and incised channels. This section has relatively low vegetation cover, and transitions to habitat are broadly characterized as mixed salt bush scrub. At the narrowest portion of Poison Canyon, the alignment spans a large sand dominated hill. West of Fish Head Rocks, a geological formation painted to resemble moray eels, the alignment passes through a narrow boulder dominated canyon that supports a variety of nesting birds and wildlife. East of this location the alignment crosses an extensive wash system before turning north toward the communities of Trona and Argus. Ongoing development in this area has likely diminished the habitat value of the area; however, large stands of native plant communities characterized as alkali sink remain in and adjacent to the right of way. In a few locations these are restricted to narrow bands of vegetation located between the existing highway and an active rail line. The alignment terminates at the McGen Substation after passing through mixed residential and commercial properties.

Inyokern-McGen-Searles No. 2 Subtransmission Line Between the Downs Substation and the Inyokern Substation

The alignment in this segment is located adjacent to Ridgecrest Boulevard, Jack Ranch Road, and Inyokern Road. This section of the line is broadly characterized by a mix of residential developments,

commercial properties, open space, and existing primary roadway subject to routine vehicle traffic. In addition, various utilities and electrical distribution corridors are present in this section of the project.

On Ridgecrest Boulevard between the Downs Substation and Jack Ranch Road, the right of way conditions are largely disturbed and existing native habitat is fragmented and subject to ongoing anthropogenic disturbance. While large blocks of habitat remain; their location proximate to the City of Ridgecrest reduce their overall habitat value. Due to the proximity to human development, this section of the right of way is not expected to support desert tortoise; however, other more disturbance tolerant species may be present including burrowing owl.

Habitat conditions improve on Jack Ranch Road between Ridgecrest Boulevard and West Inyokern Road. Large expanses of open lands with connectivity to adjacent habitat north and south of the city occur in this region and abut the right of way. This area is characterized as creosote bush scrub and appears to support only limited invasive plant species. Several small access roads occur in this section of the right of way although some of the poles do not have clearly defined access roads. Natural lands in this area could support a variety of species including desert tortoise, MGS, and burrowing owl.

Lands adjacent to Inyokern Road support a variety of small businesses, private homes, and open space. Inyokern Road is a major arterial roadway for the region and subject to routine and occasional heavy vehicle use. Habitat along this section of the line varies greatly and portions of the right of way may support populations of sensitive wildlife. A large swath of open land is present in this section and likely provides connectivity for a variety of wildlife, although road traffic and the perimeter fencing on the China Lake Naval Air Weapons Station (CLNAWS) likely acts as a filter for some species.

Inyokern-McGen-Searles No. 2 Subtransmission LineBetween the Downs Substation and the McGen Substation

From the Downs Substation to San Bernardino Avenue, the alignment is located primarily in developed portions of the city of Ridgecrest. Heading east from San Bernardino Avenue to the entrance of Poison Canyon the alignment is located adjacent and roughly parallel to SR 178 (i.e., Ridgecrest Boulevard). This area, while bordering an existing highway, is located in open desert supporting relatively pure stands of creosote bush scrub and mixed salt bush scrub. As expected, invasive species have colonized some of the road edges; however, most of the existing subtransmission line poles are off-set from the highway and are located in less disturbed habitat. Most of this area has the potential to support desert tortoise, MGS, and burrowing owl.

At Poison Canyon the alignment turns north east, crosses wetted portions of Poison Canyon Creek and moves into the steep hills of the canyon. Vegetation cover is lower in this area and large sections of desert pavement occur. Plant communities intergrade between creosote bush scrub and mixed saltbush scrub. Portions of this alignment also support desert holly (*Atriplex hymenelytra*), desert trumpet (*Eriogonum inflatum*), and bush seepweed (*Suaeda moquinii*). The alignment continues through the hills and transitions to the margins of the slope in the Searles Valley. Depending on the location of the alignment, the habitat conditions vary and range from highly disturbed areas to relatively intact but fragmented native plant communities. While habitat conditions have been degraded over time, there remains the potential for sensitive species to occur including MGS and burrowing owl.

In the community of Argus, the alignment is located in developed areas. North of this location the line crosses a small stand of native habitat before entering the McGen Substation. Development in this area has likely restricted the potential for sensitive species to occur; however, more disturbance tolerant species such as burrowing owl may still occur.

~~Along this line,~~ ~~SCE proposes to replace approximately six existing wood poles to support the new fiber optic telecommunications facilities. These poles are~~ The pole replacement sites are located in Section 29, 30, and 31 of Township 25 South, Range 43 East on the Trona West 7.5 Minute USGS quadrangle. Elevations in this area range from approximately 1,650 feet to 1,700 feet amsl. SCE proposes to replace approximately six existing wood poles to support the new fiber optic telecommunications cable. The six poles are located between south Trona and the community of Argus. Most of the pole locations occur adjacent to an active rail line which supports ongoing mining operations at Searles Lake. One pole is located in a developed area, and five poles occur in semi disturbed habitat dominated by saltbush scrub. At least three of the poles occur in habitat that has been degraded from historic land development. While habitat conditions have been degraded in this area, there remains a low potential for sensitive species to occur, including MGS. Burrowing owl may also occur in areas supporting suitable burrow substrate and cover requirements.

Vegetation and Wildlife

Vegetation

SCE conducted vegetation mapping surveys in February and April 2010 for the Proposed Project. Aspen Environmental Group (Aspen) conducted field surveys in April 2011 and March 2012 to verify previous mapping efforts. Plant community nomenclature follows that of Sawyer and Keeler-Wolf (2009) with additional explanation where microhabitats necessitate further description. Figure B.3.4-1 identifies the vegetation communities present at the proposed Downs Substation site; vegetation communities identified by SCE along the fiber optic telecommunication cable route are presented in Figures B.3.4-2 through B.3.4-5. These figures are provided at the end of this section.

The Downs Substation expansion site is located in an area supporting residential, recreational, and commercial development. These developments surround a patchwork of native desert plant communities that are now isolated and largely cut off from adjacent natural lands. As expected, while still supporting native plant communities, most of the native wildlife with limited dispersal ability has been locally extirpated from these areas. The Downs Substation expansion site supports two vegetation communities, including disturbed creosote bush-white bursage series and disturbed ruderal sink. The creosote bush-white bursage series covers approximately 3.9 acres of the substation expansion site. This upland vegetation community is typically found on alluvial fans, bajadas, and upland slopes with well-drained soils. Creosote bush-white bursage communities have a two-tiered canopy with the taller tier standing less than three meters and an open ground layer. Plant species that occur at the substation expansion site are typical of creosote bush-white bursage communities and include creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*), and golden cholla (*Cylindropuntia echinocarpa*). Common annuals such as desert sunflower (*Geraea canescens*), fiddleneck (*Amsinckia tessellata*), and desert dandelion (*Malacothrix glabrata*) were also noted at the site. The disturbed ruderal sink community comprises approximately 0.7 acre in the southeast corner of the substation expansion site. This community supports only non-native species, including Russian thistle (*Salsola tragus*), bull thistle (*Cirsium vulgare*), and mustard (*Brassica tournefortii*). This area was artificially formed by the berms created for the adjacent Downs Street and recreational fields, creating a low point where water occasionally gathers during storm events. Other weedy annuals noted by Aspen in this area include London rocket (*Sisymbrium irio*), cheat grass (*Bromus tectorum)*, and mouse barely (*Hordeum murinum*). A visual screen of ornamental plantings borders portions of the existing substation. These include various pines (*Pinus* spp.), oleander (*Nerium oleander*), and junipers (*Juniperus* sp.). Several mulberry trees (*Morus* sp.) were also noted adjacent to the site.

A total of three vegetation communities were identified along the subtransmission line alignment, which includes the areas where six subtransmission poles would be replaced and fiber optic line would be installed. These include creosote bush-white bursage series, mixed saltbush scrub, and alkali sink. Additionally, there are several areas that are devoid of vegetation or highly disturbed, such as those located within the urbanized areas of Ridgecrest and Trona. Where the subtransmission line alignment remains close to the established roads, weedy annuals, common to disturbed road edges, intergrade with the native vegetation and in some areas reduce native plant diversity. This is apparent in some locations between the Downs and Inyokern Substations, along a few locations on SR 178, and near Searles Lake. However, many of the existing poles are located in areas supporting relatively intact native vegetation. This includes poles that are adjacent to existing roadways where the line is off-set from the highway. While weeds are broadly distributed across the region; portions of the alignment that cross more natural lands, such as between the Inyokern Substation and areas west of the Searles Substation tend to support lower densities of exotics.

Creosote bush-white bursage series was the most common community noted along the subtransmission line alignment. This community occurs along approximately 39 miles of the alignment and includes both disturbed (within the communities of Ridgecrest and Trona) and undisturbed (apart from the existing subtransmission line corridor) habitat. This community supports a similar composition of species to those described above. The mixed saltbush scrub community, comprising approximately six miles of the subtransmission line corridor, is dominated by desert holly (*Atriplex hymenelytra*) and spiny hopsage (*Grayia spinosa*). Near Searles Lake alkali sink communities dominated by rusty molly (*Kochia californica*) are prevalent and occur along approximately four miles of the alignment, including the five southern pole replacement areas. Unvegetated or more disturbed areas are represented along approximately 13 miles of the alignment, including the northern most pole replacement area.

Weeds

Numerous invasive non-native weeds have already become widespread throughout the Mojave Desert and for some invasive species the prevention of further spread is impracticable. Examples of these species include red brome (*Bromus rubens*), cheat grass (*B. tectorum*), Mediterranean grass (*Schismus spp.*), red-stemmed filaree (*Erodium cicutarium*), and Russian thistle (*Salsola tragus*). Other invasive species, particularly Sahara mustard (*Brassica tournefortii*), can substantially alter native habitats if left uncontrolled, but to date, have not become pervasive within or adjacent to the Project area. Invasive non-native weeds were relatively low in abundance and diversity throughout the Project area with the exception of the Downs Substation expansion site, within urban portions of the fiber optic route, and along some of the more disturbed road shoulders such as along Highway 178. Approximately, seven species of invasive weeds were detected during the surveys conducted by SCE and Aspen in 2010 and 2011. These included:

- Red brome (*Bromus madritensis ssp. rubens*) is widespread and abundant in the Mojave Desert. Its seeds can disperse readily and across large distances. California Invasive Plant Council (Cal-IPC) has declared this plant highly invasive (Cal-IPC, 2006). Because of its widespread distribution, red brome is not considered feasible for general control.
- Cheat grass (*Bromus tectorum*) is a closely related species and common on the Downs Substation expansion site. It is also highly invasive (Cal-IPC, 2006) but also not considered feasible for general control.
- Mediterranean grass (*Schismus spp.*) was observed patchily distributed throughout the Project site. Cal-IPC has determined that this plant has a limited invasiveness rating in California (Cal-

IPC, 2006). BLM and other agencies recognize that because of the widespread distribution of Mediterranean grass, this species is not considered feasible to control.

- Filaree or storksbill (*Erodium cicutarium*) is a widespread annual species common in disturbed habitats and often on undisturbed desert uplands. It has a limited overall rating by Cal-IPC (Cal-IPC, 2006), generally because the ecological impacts of the species are minor. Because of its widespread distribution, eradication of filaree is not considered feasible.

- Sahara mustard (*Brassica tournefortii*) is present at the Downs Substation expansion site and Cal-IPC has declared this plant highly invasive (Cal-IPC, 2006).

- London rocket (*Sisymbrium irio*) is present at the Downs Substation expansion site and is widespread throughout the warm deserts of North America. Cal-IPC has declared this plant moderately invasive (Cal-IPC, 2006). More so than the other invasive herbs, it tends to be in slightly mesic or shaded sites. At the Downs Substation expansion site it occurs near the seasonal depression.

- Russian thistle/tumbleweed (*Salsola spp.*) was reported as widespread with a patchy distribution throughout the Project area. More so than most other invasive species, Russian thistle tends to be restricted to roadway shoulders and other sites where the soil has been recently disturbed (i.e., within a few years). Cal-IPC has determined that this plant has a limited invasiveness rating in California (Cal-IPC, 2006).

Common Wildlife

Although the Project area and adjacent lands are widely represented by developed areas, which surround the Downs Substation expansion site, and existing roads along the subtransmission line corridor, the majority of surrounding habitat consists of relatively undisturbed desert scrub vegetation communities. As a result, the Project area supports a broad diversity of wildlife species and several of these were observed in or around the Project area during surveys conducted by SCE between 2010 and 2011. Although no invertebrates were reported in the survey results, several common species are expected to occur. These include representatives from various insect orders, such as Orthoptera (grasshoppers, crickets), Odonata (dragonflies, damselflies), Hemiptera (true bugs), Coleoptera (beetles), Diptera (flies), Hymenoptera (bees, wasps, ants), and Lepidoptera (butterflies, moths), among others. Additionally, portions of the Project area provide potential habitat for alkali fairy shrimp (*Branchinecta mackini*), which occurs in claypan areas throughout the Mojave Desert.

Fish and amphibian species are not likely to occur within or adjacent to the Project area because no permanent water sources are found, with the exception of small areas of water in Poison Canyon which are not conducive to supporting these species due to toxic levels of naturally occurring arsenic, selenium and other minerals. Due to the relatively disturbed habitat at the Downs Substation expansion site, few reptiles were noted at that location. However, despite some of the disturbance associated with ~~and along~~ the subtransmission line corridor, common reptile species observed during surveys ~~were limited to~~ included side-blotched lizard (*Uta stansburiana*), desert iguana (*Dipsosaurus dorsalis*), western zebratail (*Callisaurus draconoides rhodostictus*), and tiger whiptail (*Aspidoscelis tigris*). A chuckwalla (*Sauromalus obesus*) was observed near the alignment west of Fish Head Rocks in Poison Canyon during surveys conducted in March 2012.

Despite the moderate to low shrub density that occurs in some areas, the Project area and surrounding lands provide forage, cover, roosting, and nesting habitat for a variety of common bird species. Some of the common migratory and resident birds observed during surveys include house finch (*Carpodacus*

mexicanus), black-throated sparrow (*Amphispiza bilineata*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenainda macroura*), and roadrunner (*Geococcyx californianus*). Two common raptor species, red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), were also detected. Wintering species, such as merlins, sharp-shinned hawks, and ferruginous hawks, may utilize the Project area for foraging and are common in the high desert. While not expected to occur at the Downs substation expansion site, mountain plovers and bald eagles are known from the Inyo sewage basins and are likely episodic foragers across most of the region (Audubon, 2010-2011). Other species noted by Audubon included northern harrier and peregrine falcon in the southeast Ridgecrest area in 2010. In April 2011, Aspen identified a pair of peregrine falcons nesting within the steep, rocky slopes of Poison Canyon just north of Highway 178. In 2012, a raven nest was observed adjacent to the right of way in Poison Canyon and at least two stick nests were noted along the Inyokern-McGen-Searles subtransmission line right of way. An unknown stick nest, possibly from a raven, was detected adjacent to the Searles Substation; however, a red-tailed hawk was observed perched near the site for over an hour.

Some of the common mammals recorded during surveys included deer mouse (*Peromyscus* sp.), Panamint kangaroo rat (*Dipodomys panamintinus*), California ground squirrel (*Spermophilus beecheyi*), white-tailed antelope ground squirrel (*Ammospermophilus leucurus*), black-tailed jackrabbit (*Lepus californicus*), and coyote (*Canis latrans*).

Special-Status Plants and Animals

The Project area is known to support a variety of sensitive plant and wildlife species. While urban areas associated with the community of Ridgecrest and disturbed road edges have a lower potential to support sensitive vegetation and wildlife, much of the region is known to support a broad diversity of sensitive wildlife including State and federally listed species. Some of the species either known to occur in the Project area or detected during surveys conducted by SCE or Aspen include desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Spermophilus mohavensis*), loggerhead shrike (*Lanius ludovicianus*), Swainson's hawk (*Buteo swainsoni*), and American badger (*Taxidea taxus*). Rare plants were not detected during the surveys and generally have a low potential to occur in most of the Project area.

Special-status species include those listed as threatened or endangered under the federal or State endangered species acts, species proposed for listing, California species of special concern, and other species that have been identified by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), U.S. Department of the Interior Bureau of Land Management (BLM), covered under the BLM's West Mojave Plan (WEMO) or other agency as unique or rare.

The BLM (2010a) maintains a list of sensitive species, including species that are rare, declining, or dependent on specialized habitats. The list includes all plants ranked by the California Native Plant Society (CNPS) and CDFG as California Rare Plant Rank (RPR) 1. The BLM manages sensitive species to provide protections comparable to species that may become listed as threatened or endangered (i.e., candidate species for federal listing).

All of the CNPS List 1B and 2 plants in the Project area are also included in the CDFG Special Plants List (CDFG, 2010b) and are tracked by CDFG's California Natural Diversity Database (CNDDB). The CNPS inventory has been a broadly recognized and accepted source of science-based information on the rarity, endangerment, and distribution of California special-status plants since its first edition in 1974. The BLM has a policy of designating all CNPS List 1B plants, unless specifically excluded by the BLM State Director, as BLM Sensitive (BLM, 2009). By CNPS's standards, the plants on CNPS Lists 1A, 1B and 2 meet

the definitions of Sections 2062 and 2067 (California Endangered Species Act) of the California Fish and Game Code, and are eligible for State listing (CNPS, 2001).

Table B.3.4-1 identifies the special-status species that were reported to or potentially occur in the vicinity of the Project area, based on field surveys, searches of the CDFG's CNDDB, USFWS species lists, and CNPS's Inventory of Rare and Endangered Plants.

Critical Habitat

Critical habitat for the desert tortoise does not occur in the Project area. The nearest designated critical habitat for this species is Unit 1 (Fremont-Kramer) and is located approximately 11 miles south of western portion of the Inyokern-McGen-Searles No. 2 subtransmission line. Unit 2 (Superior-Cronese) is located approximately 18 miles south of the eastern portion of Inyokern-McGen-Searles No. 2. However, suitable habitat including Mojave creosote bush scrub is present in the Project area and desert tortoises are known to occur along portions of Segments 1, 2, 3, and 4.

No areas designated by the BLM as a Area of Critical Environmental Concern (ACEC) or Desert Wildlife Management Area (DWMA) are present in the Project area. The Mohave Ground Squirrel Conservation Area (BLM, 2005) overlaps portions of the Project alignment in Segments 3 and 4 (SCE, 2010b).

Jurisdictional Waters

~~Due to the arid conditions of the Project area,~~ With the exception of portions of Poison Canyon Creek, which support standing water, most of the surface waters that exist in the region are ephemeral streams. The ephemeral streams are typically dry washes that only flow in response to precipitation. Regional storms, which generally occur in the winter months, are typically of low intensity, but can create short-lived ephemeral streams and cause substantial flooding on the playa lake beds. Alternatively, intense summer thunderstorms within the mountainous portions of the Project area can produce flooding in the low-lying valleys. During summer months, ephemeral streams may only last for a couple of hours, while during the winter they have the potential to last up to several days.

Historically this region was crossed by a series of shallow ephemeral drainages that supported flow in response to heavy rainfall. However, the establishment of a rectilinear road and drainage system coupled with urban development in the Ridgecrest area has substantially altered natural flow patterns at the Downs Substation expansion site. Other development including Highway 178 have also affected the conveyance of water in the region.

SCE conducted surveys for the presence of jurisdictional waters within the Downs Substation expansion site in April 2010 and May 2011 and along the existing subtransmission line in June and July 2011. SCE indicated in the December 2010 Biological Resources Technical Report (BRTR, 2010) that over 45 drainages occur along the northern subtransmission line and over 38 along the southern subtransmission line, where fiber optic line installation activities would occur (see Figures B.3.4-6 through B.3.4-9 located at the end of this section). Many of these features could be subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) and/or CDFG.

Table B.3.4-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in the Project Area	
			Downs Substation Expansion Site	Subtransmission Line Corridor
Plants				
Aliciella ripleyi Ripley's aliciella	Rank 2.3	Mojavean desert scrub (carbonate) at elevations between 305-1,950 m (1,000-6,400 ft); blooms May-July	Not likely to occur. Substation lacks suitable habitat.	Low. Corridor supports limited suitable habitat. This species is known from an undisclosed area of Poison Canyon; however, suitable soil types are not present near the subtransmission line.
Astragalus atratus var. *mensanus* Darwin Mesa milk-vetch	Rank 1B.1	Great Basin scrub, Joshua tree woodland, pinyon and juniper woodland at elevations between 1,340-2,315 m (4,400-7,600 ft); usually in volcanic clay, gravelly soils; blooms April-June	Not likely to occur. Project area is well below the known elevation range for this species and does not contain suitable habitat.	Not likely to occur. Project area is well below the known elevation range for this species and does not contain suitable habitat.
Astragalus lentiginosus var. microns Shining milk-vetch	Rank 1B.2	Desert sand dunes at elevations between 770-1175 m (2,500-3,800ft); blooms March-June	Not likely to occur. Substation lacks suitable habitat.	Low. Subtransmission line contains marginal habitat but is outside of known distribution of this species.
Calochortus striatus Alkali mariposa-lily	Rank 1B.2, WEMO	Chaparral, chenopod scrub, Mojavean desert scrub, meadows and seeps at elevations between 70-1,595 meters (230-5,200 ft); alkaline, mesic soils; blooms April-June	Not likely to occur. Suitable habitat does not occur in any portion of the project area.	Not likely to occur. Suitable habitat does not occur in any portion of the project area.
Camissonia boothii ssp. *boothii* Booth's evening primrose	Rank 2.3	Joshua tree woodland, pinyon and juniper woodland at elevations between 900-2,400 m (2,950-7,875 ft); blooms April-September	Not likely to occur. Substation lacks suitable habitat.	Moderate. Subtransmission line contains suitable habitat.
Canbya candida Pygmy poppy	Rank 4.3	Joshua tree woodland, Mojave desert shrublands at elevations between 580-1,220 m (1,900-4,000 ft); blooms March-June.	Low. Substation contains poor suitable habitat.	Moderate. Subtransmission line contains suitable habitat.
Carlquistia muirii Muir's tarplant	Rank 1B.3	Chaparral (montane), lower and upper montane coniferous forest at elevations between 1,100-2,500 m (3,600-8,200 ft); granitic soils; blooms July-August	Not likely to occur. Suitable habitat does not occur in any portion of the project area.	Not likely to occur. Suitable habitat does not occur in any portion of the project area.
Castela emoryi Emory's crucifixion-thorn	Rank 2.3 WEMO	Mojavean desert scrub, Sonoran desert scrub, playas at elevations between 90-670 m (295-2,200 ft); gravelly soils; blooms April-July	Not likely to occur. Substation lacks suitable habitat.	Low. Subtransmission line contains marginal habitat.

Table B.3.4-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in the Project Area	
			Downs Substation Expansion Site	Subtransmission Line Corridor
Chamaesyce vallis-mortae *(Euphorbia vallis-mortae)* Death Valley sand plant	Rank 4.2	Mojavean desert scrub on sandy soils at elevations between 0-1,310 m (0-4,300 ft); blooms May-October	Low. Suitable habitat occurs throughout the project area.	Low. Suitable habitat occurs throughout the project area.
Cryptantha clokeyi Clokey's cryptantha	BLM, Rank 1B.1	Mojavean desert scrub at elevations between 800-1,280 m (2,600-4,200 ft); blooms in April	Not likely to occur. Project area is outside of known geographic range for this species.	Not likely to occur. Project area is outside of known geographic range for this species.
Deinandra arida Red Rock tarplant	BLM, SR, Rank 1B.2, WEMO	Mojavean desert scrub at elevations between 300-950 m (990-3,120 ft); clay, volcanic tuff; blooms April-November	Not likely to occur. Suitable habitat does not occur in any portion of the project area.	Not likely to occur. Suitable habitat does not occur in any portion of the project area.
Deinandra mohavensis Mojave tarplant	BLM, SE, Rank 1B.3, WEMO	Chaparral, coastal scrub, riparian scrub at elevations between 640-1,600 m (2,100-5,250 ft); mesic areas; blooms June-January	Not likely to occur. Suitable habitat does not occur in any portion of the project area.	Not likely to occur. Suitable habitat does not occur in any portion of the project area.
Erigeron aequifolius Hall's daisy	BLM, Rank 1B.3, WEMO	Broadleafed upland forest, lower and upper montane coniferous forest, pinyon and juniper woodland at elevations between 1,500-2,440 m (4,900-8,000ft); rocky, granitic soils; blooms June-August	Not likely to occur. Project area is well below the known elevation range for this species and does not contain suitable habitat.	Not likely to occur. Project area is well below the known elevation range for this species and does not contain suitable habitat.
Eschscholzia minutiflora ssp. *twisselmannii* Red Rock poppy	BLM, Rank 1B.2	Mojavean desert scrub at elevations between 680-1,230 m (2,200-4,035 ft); volcanic tuff; blooms March-May	Not likely to occur. Suitable habitat does not occur in any portion of the project area.	Not likely to occur. Suitable habitat does not occur in any portion of the project area.
Layia heterotricha Pale-yellow layia	BLM, Rank 1B.1	Cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland at elevations between 300-1,705 m (980-5,600ft); alkaline or clay soils; blooms March-June	Not likely to occur. Project area is outside of the known distribution of this species and does not contain suitable habitat.	Not likely to occur. Project area is outside of the known distribution of this species and does not contain suitable habitat.
Mentzelia tridentata Creamy blazing star	BLM, Rank 1B.3	Mojavean desert scrub at elevations between 700-1,160 m (2,300-3,800 ft); rocky, gravelly, sandy soils; blooms March-May	Not likely to occur. Substation lacks suitable habitat.	Low. Subtransmission line contains marginal habitat.
Penstemon fruticiformis var. *amargosae* Amargosa beardtongue	BLM, Rank 1B.3	Mojavean desert scrub at elevations between 850-1,400 m (2,800-4,600 ft); blooms April-June	Not likely to occur. Suitable habitat does not occur in any portion of the project area.	Not likely to occur. Suitable habitat does not occur in any portion of the project area.

Table B.3.4-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in the Project Area	
			Downs Substation Expansion Site	Subtransmission Line Corridor
Phacelia nashiana Charlotte's phacelia	BLM, Rank 1B.2, WEMO	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodlands at elevations between 600-2,200 m (2,000-7,200 ft); usually granitic, sandy soils; blooms March-June	Not likely to occur. Project area is outside of the known distribution of this species and does not contain suitable habitat.	Not likely to occur. Project area is outside of the known distribution of this species and does not contain suitable habitat.
Phacelia novenmillensis Nine Mile Canyon phacelia	BLM, Rank 1B.2, WEMO	Broadleafed upland forest, cismontane woodland, pinyon and juniper woodland, upper montane coniferous forest at elevations between 1,645-2,640 m (5,400-8,600 ft); sandy or gravelly soils; blooms February-June	Not likely to occur. Project area is well below the known elevation range for this species and does not contain suitable habitat.	Not likely to occur. Project area is well below the known elevation range for this species and does not contain suitable habitat.
Psorothamnus arborescens var. *arborescens* Mojave indigo bush	Rank 4.3	Mojavean desert scrubin washes and on hills at elevations between 390-796 m (1,300-2,600 ft); blooms April-May.	Not likely to occur. Not observed during surveys of the proposed substation.	Low. Subtransmission line contains suitable habitat.
Saltugilia latimeri Latimer's woodland-gilia	BLM, Rank 1B.2	Chaparral, Mojavean desert scrub, pinyon and juniper woodland at elevations between 400-1,900 m (1,300-6,200 ft); rocky, sandy, granitic soils; sometimes washes; blooms March-June	Not likely to occur. Suitable habitat does not occur in any portion of the project area.	Not likely to occur. Suitable habitat does not occur in any portion of the project area.
Fish				
Siphateles bicolor mohavensis Mohave tui chub	FE, SE, WEMO	Requires deep pools, ponds, or slough-like areas and vegetation for spawning; adapted to alkaline, mineralized waters; endemic to Mojave River Basin	Not likely to occur. Suitable habitat does not occur in the project area.	Not likely to occur. Suitable habitat does not occur in the project area.
Reptiles				
Anniella pulchra pulchra Silvery legless lizard	SSC	A burrowing species associated with sandy or loose loamy soils with sparse vegetation. Chaparral, pine-oak woodland, washes, and streamside terraces are utilized. Also occurs in desert scrub. Elevated soil moisture is required.	Not likely to occur. Suitable habitat does not occur in the project area.	Not likely to occur. Suitable habitat does not occur in the project area.

Table B.3.4-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in the Project Area	
			Downs Substation Expansion Site	Subtransmission Line Corridor
Elgaria panamintina Panamint alligator lizard	SSC	Inhabits areas near permanent water in canyons, damp gullies, and rocky areas; near dense vegetation	Not likely to occur. Suitable habitat does not occur in the project area.	Not likely to occur. Suitable habitat does not occur in the project area.
Gopherus agassizii Desert tortoise	FT, ST	Most common in desert scrub, desert wash, and Joshua tree habitats (creosote bush habitat with annual wildflower blooms preferred; require friable soils for burrow and nest construction	Low. Marginally suitable habitat occurs within disturbed creosote bush-white bursage scrub; site surrounded on three sides by developed/disturbed areas; not detected during focused surveys.	Present. This species is known to occur from the project area and suitable habitat occurs along, or adjacent to, most of the existing subtransmission line corridor with the exception of developed areas.
Birds				
Aquila chrysaetos Golden eagle	CFP,	Rolling hills, mountains, sage- juniper flats and deserts, secluded cliffs with overhanging ledges and large trees for nesting; open areas for foraging.	Low. No nesting habitat onsite; however, marginal foraging habitat occurs.	Moderate. Limited nesting habitat occurs along portions of the existing subtransmission line corridor; may forage throughout project area.
Asio otus Long-eared owl	SSC, WEMO	Riparian bottomlands grown to tall willows and cottonwoods, belts of live oak paralleling stream courses; require old nests of crows, hawks, or magpies for breeding	Low. Suitable nesting habitat does not occur; marginal foraging habitat available.	Low. Suitable nesting habitat does not occur; marginal foraging habitat available.
Athene cunicularia Burrowing owl	BLM, SSC, WEMO	Open, dry grasslands, deserts and ruderal areas with suitable small mammal burrows, especially those of California ground squirrels	High. Suitable habitat, including numerous potential burrows, occurs onsite.	High. Suitable habitat occurs along, or adjacent to, the entire existing subtransmission line corridor with the exception of a few developed areas.
Buteo regalis Ferruginous hawk	BLM	Nests in foothills or prairies; not known to breed in California; forages over a variety of open, treeless habitats; winter migrant in California.	Low. Marginal foraging habitat occurs onsite.	Moderate. Existing subtransmission line corridor supports suitable foraging habitat; recently identified just south of Inyokern.
Buteo swainsoni Swainson's hawk	WEMO	Stands with few trees, juniper-sage flats, riparian habitat, and oak savannah. Forages in adjacent grasslands and agricultural fields and pastures.	Low. Nesting habitat limited by surrounding development; may periodically utilize the site for foraging.	Moderate. Potential nesting habitat limited throughout entire existing subtransmission line corridor; however, may utilize open areas surrounding corridor for foraging; recently observed flying in area approximately five miles south of City of Ridgecrest (likely migrant).

Table B.3.4-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in the Project Area	
			Downs Substation Expansion Site	Subtransmission Line Corridor
Charadrius alexandrinus nivosus Western snowy plover	FT, SSC	Breed on barren to sparsely vegetated flats and along shores of alkaline and saline lakes, reservoirs, ponds, river channels, and salt evaporation ponds.	Not likely to occur. Substation expansion site does not support suitable habitat.	Low. Species has been known to breed at Searles Lake adjacent to northeast portion of the existing subtransmission line corridor; however, recent declines in populations have been attributed to reductions in suitable habitat; specific project area does not support suitable habitat.
Charadrius montanus Mountain plover	SSC, BLM	Winters in short grasslands and agricultural fields. Breeds in short-grass prairies outside of California.	Not likely to occur. Substation expansion site does not support suitable habitat.	Low. Prime wintering habitat does not occur. However the bird may be an occasional winter forager in the project area.
Circus cyaneus Northern harrier	SSC	Breed and forage in a variety of open habitats that provide adequate cover, prey abundance, and perching sites.	Low. Substation expansion site does not provide suitable nesting habitat; marginal foraging habitat occurs.	Moderate. Existing subtransmission line corridor does not provide suitable nesting habitat; however, species may utilize entire area, particularly desert sink habitat in northeast portion, for foraging; recently detected at Inyokern sewage ponds.
Dendroica petechia brewsteri Yellow warbler	SSC, WEMO	Riparian plant associations; prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging	Not likely to occur. Suitable habitat does not occur in the Project area.	Not likely to occur. Suitable habitat does not occur in the Project area.
Eremophila alpestris California horned lark	SSC	Open habitats, forages in bare dirt in short and/or sparse grassland and areas of scattered shrubs.	High. Suitable habitat occurs for this species that is fairly common in the region.	Present. Identified along the existing subtransmission line corridor during surveys.
Falco mexicanus Prairie falcon	WL	Annual grassland to alpine meadows, but is typically found in perennial grasslands, savannahs, rangeland, some agricultural fields and desert scrub areas.	Low. No suitable nesting habitat; however, may periodically utilize the site for foraging.	High. Rocky cliffs along the northeastern portion of the existing subtransmission line corridor provide suitable nesting habitat; may forage throughout the Project area.
Falco peregrinus anatum American peregrine falcon	CFP	Breeds near wetlands, lakes, rivers, or other water on high cliffs, dunes, mounds, buildings.	Low. No suitable nesting habitat; marginal foraging habitat occurs onsite.	Present. Breeding pair identified during April 2011 reconnaissance surveys within steep, rocky slopes in Poison Canyon, just north of Hwy 178.

Table B.3.4-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in the Project Area	
			Downs Substation Expansion Site	Subtransmission Line Corridor
Haliaeetus leucocephalus Bald eagle	SE, CFP	Nests in large, old-growth, or dominant live trees with open branches; requires large bodies of water with abundant fish for feeding.	Low. No suitable nesting or foraging habitat; recently detected near Inyokern sewage ponds.	Low. No suitable nesting or foraging habitat; recently detected near Inyokern sewage ponds.
Lanius ludovicianus Loggerhead shrike	SSC, WEMO	Broken woodlands, savannah, pinyon and juniper woodland, Joshua tree woodland, desert scrub, oases; prefers open country for hunting and fairly dense shrubs and brush for nesting	High. Suitable habitat occur onsite.	Present. Species identified along the existing subtransmission line corridor during surveys.
Melozone crissalis eremophilus Inyo California towhee	FT, SE	Inhabits willow thickets growing at permanent springs or seepages in canyons; ranges into adjacent desert brushlands	Not likely to occur. Suitable habitat does not occur onsite.	Not likely to occur. Suitable habitat does not occur onsite.
Toxostoma crissale Crissal thrasher	SSC	Occupies desert riparian, and scrub habitats with dense, low, shrubby vegetation.	Low. Site supports only marginal nesting habitat; may utilize site for foraging.	Moderate. Potential habitat occurs throughout adjacent areas of existing subtransmission line corridor where vegetation is relatively denser.
Toxostoma lecontei Le Conte's thrasher	SSC, WEMO	Primarily open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats; commonly nests in dense, spiny shrubs or densely branched cacti in desert wash habitat	Low. Site supports only marginal nesting habitat; may utilize site for foraging.	High. Suitable habitat occurs throughout portions of the existing subtransmission line corridor with the exception of developed areas.
Mammals				
Antrozous pallidus Pallid bat	BLM, SSC	Deserts, grasslands, shrublands, woodlands, and forests; most common in open, dry habitats with rocky areas for roosting	Moderate. May roost in abandoned houses and other structures nearby.	Moderate. Suitable roosting habitat occurs along northeastern portions of existing subtransmission line corridor.
Corynorhinus townsendii Townsend's big-eared bat	BLM, SSC	Throughout California in a wide variety of habitats; most common in mesic sites; roosts in the open, hanging from walls and ceilings	Moderate. May roost in abandoned houses and other structures nearby; may utilize site for foraging.	Moderate. Existing subtransmission line corridor does not support open water sources associated with roosting sites for this species; may infrequently utilize area for foraging

Table B.3.4-1. Special-Status Species that Could Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in the Project Area	
			Downs Substation Expansion Site	Subtransmission Line Corridor
Euderma maculatum Spotted bat	BLM, SSC	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests; requires rocky crevices in cliffs or caves for roosting; feeds over water and along washes	Low. Species is known from region. May roost in abandoned houses and other structures.	Moderate. Species may utilize rocky cliffs along northeastern portions of existing subtransmission line corridor; limited foraging opportunities available.
Eumops perotis *Western Mastiff bat*	BLM, SSC	Occupies a wide variety of habitats from arid deserts and grasslands; requires rocky crevices in cliffs or caves for roosting; sometimes roosts in buildings.	Low. Species is known from region. May roost in abandoned houses and other structures.	Moderate. Species may utilize rocky cliffs along northeastern portions of existing subtransmission line corridor; limited foraging opportunities available.
Myotis ciliolabrum Western small-footed myotis	BLM, WEMO	Open habitats with rocks or caves for roosting	Low. Site does not support suitable roosting habitat; may infrequently forage at site.	Low. Species may utilize rocky cliffs along northeastern portions of existing subtransmission line corridor; limited foraging opportunities available
Myotis yumanensis Yuma myotis	BLM, WEMO	Open habitats with rocks or caves for roosting	Low. Site does not support suitable roosting habitat; may infrequently forage at site.	Low. Species may utilize rocky cliffs along northeastern portions of existing subtransmission line corridor; limited foraging opportunities available
Ovis canadensis nelson Nelson's bighorn sheep	BLM, WEMO	Prefer mountainous terrain above the desert floor; steep, rocky, open habitats.	Not likely to occur. Site does not support suitable habitat.	High. Rocky hills and areas near the base of the hills along northeastern portions of existing subtransmission line corridor support suitable habitat.
Taxidea taxus American badger	SSC	Expansive grassland with friable soils and adequate prey base	Moderate. Site supports marginal habitat; no suitable burrows identified during surveys.	High. Suitable habitat occurs throughout undeveloped areas of existing subtransmission line corridor; species has been previously recorded along western portions.
Vulpes macrotis arsipus Desert kit fox	Title 14		Moderate. Suitable habitat occurs on the site and in adjacent habitat. Presence of dogs and human disturbance may limit presence.	High. Suitable habitat occurs throughout undeveloped areas of existing subtransmission line corridor.
Xerospermophilus mohavensis Mohave ground squirrel	ST, WEMO	Open desert scrub, alkali scrub, and Joshua tree woodland; feeds in annual grasslands; prefers sandy to gravelly soils and avoids rocky areas	Low. Site supports marginal habitat, but is limited by ongoing human activities, including trash dumping and adjacent development.	Present. Identified along southern portion of existing subtransmission line corridor during surveys; many portions of the alignment supports suitable habitat.

Definitions Regarding Potential Occurrence:

Present:	Species or sign of its presence observed on the site
High:	Species or sign not observed on the site, but reasonably certain to occur on the site
Moderate:	Species or sign not observed on the site, but conditions suitable for occurrence
Low:	Species or sign not observed on the site, conditions marginal for occurrence
Not likely to occur:	Species or sign not observed on the site, conditions unsuitable for occurrence

STATUS CODES:

FE	Federally Endangered
FT	Federally Threatened
FC	Federal Candidate
SE	State Endangered
ST	State Threatened
SSC	California Species of Special Concern
FP	Fully Protected
WL	Watch List
CNPS	California Native Plant Society Listing
1B	Plants Rare, Threatened, or Endangered in California and elsewhere
2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3	Plants about which we need more information – a review list
4	Plants of limited distribution – a watch list
.1	Seriously threatened in California (high degree/immediacy of threat)
.2	Fairly threatened in California (moderate degree/immediacy of threat)
.3	Not very threatened in California (low degree/immediacy of threats or no current threats known)

SCE indicated that one shallow drainage area occurs within the Downs Substation expansion area. This drainage is highly disturbed and isolated between the upstream western boundary at South Mahana Street and the southeastern boundary at Downs Street to the east by adjacent development, including residential lots, recreational fields, and paved roads. SCE considered the drainage to not meet the requirements identified by the CDFG because it is isolated and supports no native bed, bank, or channel and has no vegetation difference from adjacent highly disturbed upland areas, with the exception of the blocked downstream portion that supports only dense non-native weedy species, including Russian thistle (*Salsola tragus*) and Saharan mustard (*Brassica tournefortii*). However, while highly fragmented and confined to a half mile area, a site investigation conducted by Aspen noted the presence of the drainage that flows into the site. While features on the Downs Substation expansion site appear to lack a defined channel; water is conveyed more as sheet flow until it pools against a berm that borders Downs Street. At this location water flows into manmade culverts that parallel Downs Street. Therefore, the drainage area may have the potential to be considered Waters of the State by the CDFG. Because of its location in an internally drained basin it would not likely be considered jurisdictional under current direction from the Corps.

Access roads for both of the two subtransmission line alignments would be required to cross numerous alluvial fans that support a network of small ephemeral drainages. In addition, at least one potential access road crosses a wetted portion of Poison Canyon Creek. Most of these features have the potential to be considered Waters of the State by the CDFG. Two large drainages that also merit discussion cross the Inyokern-McGen-Searles No. 1 115-kV subtransmission line. One of these, Little Dixie Wash, is present on portions of Segment 1, 3, and 4 and acts as an important wildlife corridor for Mohave ground squirrel (BRTR, 2010). However, no drainages or topographic features, including a bed, bank, and channel, were found within a 250-foot radius of any of the six pole replacement locations; nor was there any hydrophytic vegetation detected. Soils were alkaline and sandy. For Pole 1, runoff drains to the east to Highway 178 and to the railroad bed between the subtransmission line and Searles dry lake bed for the remaining poles. The runoff would eventually be routed to Searles dry lake. The entire Project area is a closed basin draining into Searles dry lake bed.

No federal jurisdictional waters are expected to occur at the Downs Substation expansion site or along the subtransmission line route, nor do any drainage features in the basin connect to jurisdictional waters. Wetlands are not present in the project footprint.

Applicable Regulations

Federal

Federal Endangered Species Act of 1973. The federal Endangered Species Act (ESA) designates and provides for protection of threatened and endangered plant and wildlife species and their critical habitat. “Take” of a federally listed species is prohibited without the appropriate permits, which may be obtained through Section 7 consultation (between federal agencies) or Section 10 Habitat Conservation Plan.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) makes it unlawful to take or possess any migratory non-game bird (or any part of such migratory non-game bird) as designated in the MBTA unless permitted by regulation (e.g., duck hunting).

Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act provides for the protection of the bald eagle and golden eagle by prohibiting, except under certain specified conditions, the take, possession, and commerce of such birds. On November 10, 2009 the USFWS implemented new rules (74 FR 46835) governing the “take” of golden and bald eagles. Although the federal government

may issue a take permit for this species, the direct take of golden eagles would not be authorized by the CDFG. This species is designated as "fully protected" (California Fish & Game Code §§ 3511) and may not be taken or possessed.

BLM West Mojave Plan. The West Mojave Plan (WEMO) is a pending habitat conservation plan (HCP) pursuant to the federal ESA and an amendment to the California Desert Conservation Area (CDCA) Plan covering over nine million acres in five counties with the purpose of creating a comprehensive strategy to conserve and protect the desert tortoise, the Mohave ground squirrel, and nearly 100 other sensitive species, as well as the natural communities in which they reside. The 9,359,070-acre planning area includes 3,263,874 acres of BLM-administered public lands; 3,029,230 acres of private lands; and 102,168 acres of lands administered by the State of California within portions of Inyo, Kern, Los Angeles, and San Bernardino counties.

In March 2006 the BLM issued a Record of Decision (ROD) for the WEMO Final Environmental Impact Statement. However, the ROD addressed only the BLM's amendment to the CDCA Plan, and it did not include actions proposed by State and local governments for non-federal lands. The HCP has not been completed and would require greater specificity for local governments to obtain incidental take permits under the State and Federal ESAs.

The WEMO area in Kern County begins at the intersection of Kern, Inyo, and San Bernardino Counties northeast of Ridgecrest, California. The area approximately follows the Sierra Nevada Mountain Range to the Southwest and continues to the Tehachapi Mountains and then to the Los Angeles County line east-northeast of Quail Lake. The Project area falls within the boundaries of the WEMO and portions of the existing subtransmission line corridor on which fiber optic telecommunication cable would be installed are located on BLM lands which are currently subject to the WEMO as it has been adopted for lands administered by the BLM.

State

California Endangered Species Act of 1983. The California Endangered Species Act (CESA) protects the State's rare, threatened, and endangered species. "Take" of a State-listed species is prohibited without an Incidental Take Permit.

Fish and Game Code, Sections 3511, 4700, 5050, and 5515. These sections of the California Fish and Game Code designate certain species as "fully protected" and prohibits the "take" of such species or their habitat unless for scientific purposes.

Fish and Game Code, Section 1600 et seq (Streambed Alteration Agreement). This section of the California Fish and Game Code regulate activities that may divert, obstruct, or change the natural flow or the bed, bank, or channel of any river, stream, or lake in California designated by CDFG in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit. Impacts to vegetation and wildlife resulting from disturbances to waterways are also reviewed and regulated during the permitting process.

Local

Kern County General Plan. The Kern County General Plan identifies the federal, State, and local statutes, ordinances, or policies that govern the conservation of biological resources that must be considered by Kern County (County) during the decision-making process for any project that could impact biological resources (Kern County, 2004).

Land Use, Open Space, and Conservation Element. The Land Use, Open Space, and Conservation Element of the Kern County General Plan states that the element provides for a variety of land uses for future economic growth while also assuring the conservation of County's agricultural, natural, and resource attributes. Section 1.10, General Provisions, provides goals, policies, and implementation measures that apply to all types of discretionary projects, as shown below.

1.10.5 – Threatened and Endangered Species

Policies

- Policy 27. Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.
- Policy 28. County should work closely with State and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.
- Policy 29. The County will seek cooperative efforts with local, State, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.
- Policy 30. The County will promote public awareness of endangered species laws to help educate property owners and the development community of local, State, and federal programs concerning endangered species conservation issues.
- Policy 31. Under the provisions of the California Environmental Quality Act (CEQA), the County, as lead agency, will solicit comments from the California Department of Fish and Game and the U.S. Fish and Wildlife Service when an environmental document (Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report) is prepared.
- Policy 32. Riparian areas will be managed in accordance with United States Army Corps of Engineers, and the California Department of Fish and Game rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.

Implementation Measures

- Implementation Measure Q. Discretionary projects shall consider effects to biological resources as required by the CEQA.
- Implementation Measure R. Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to the CEQA.
- Implementation Measure S. Pursue the development and implementation of conservation programs with State and federal wildlife agencies for property owners desiring streamlined endangered species mitigation programs.

City of Ridgecrest General Plan Conservation Element 1991-2010 (City of Ridgecrest, 2008a).

Habitat and Wildlife

Goal 5.1 Maintain the high level of environmental quality now characteristic of the Indian Wells Valley that makes it a desirable place to live, work, and enjoy leisure time by managing urban growth patterns in the Valley.

Objectives: Identify and establish habitat preservation areas and permanent interpretive programs and facilities.

Policies: 5.1.7 Promote the survival of native wildlife species and the preservation of their natural habitat.

5.1.8 Prohibit off-highway vehicle use in designated habitat preservation areas.

Goal 5.5 Achieve a balanced distribution of public and private open space lands to provide the attractive environment essential to a sound economy, environmental protection, recreation and the amenities required to maintain an acceptable quality of life level.

Objectives: Designate the lands specified in the Habitat Conservation Plan (being developed by a coalition of agencies) as flora and fauna preserve areas.

Policies: 5.5.1 Encourage County, State, and federal agencies who control habitat and open space lands to maintain such areas for the benefit of the general public.

B.3.4.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Measures

In order to reduce or avoid impacts to biological resources SCE has proposed a series of Applicant Proposed Measures (APMs) that would be implemented during the construction and operation of the Proposed Project. These APMs, shown in Table B.3.4-2, were outlined in the PEA (SCE, 2010) and include a range of actions designed to protect biological resources. Although the APMs include a variety of mechanisms that would reduce impacts to biological resources, many of the conditions do not meet the criteria identified by CEQA as a defensible, enforceable mitigation measure. In the following disclosure and analysis of the Project's potential to impact biological resources, it is assumed that APMs would be implemented as elements of Project development, planning, and construction. These APMs are incorporated into additional more specific mitigation measures that would be implemented to ensure that all impacts would be reduced to a less-than-significant level. For example, measures would be considered inadequate if they lack specificity regarding the timing of an action; do not propose mitigation ratios or clearly identified performance standards; do not identify the expected goals of a specific plan; or do not identify reporting standards or guidelines. While some of the measures proposed by SCE provide some level of detail, most of the APMs do not provide specificity or contain clear enforceable protocols that would be implemented in the field.

Table B.3.4-2. Applicant Proposed Measures – Biological Resources

APM	Description
APM BR-1	In areas where the six subtransmission pole replacements would occur and where the telecommunication cable would be strung, the speed limits on all unpaved areas of the Proposed Project would be a maximum of 15 mph.
APM BR-2	A Worker Environmental Awareness Program (WEAP) would be prepared, and all construction crews and contractors would be required to participate in WEAP training prior to starting work on the project. The WEAP training would include a review of the special-status species and other sensitive resources that could exist in the Project site and vicinity, the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources. A record of all personnel trained would be maintained.
APM BR-3	Pre-construction biological clearance surveys, including surveys and monitoring, would be performed to avoid or minimize impacts on special-status plants, breeding birds, or wildlife species.

Table B.3.4-2. Applicant Proposed Measures – Biological Resources

APM	Description
APM BR-4	All replaced poles would be designed to be avian-safe in accordance with the Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (Avian Power Line Interaction Committee [APLIC], 2006).
APM BR-5	During the installation of fiber optic telecommunication cable and subtransmission poles, potential habitat for the desert tortoise and Mohave ground squirrel will be avoided to the extent feasible. This will be accomplished through ~~restricting vehicles to previously established access roads, with the oversight of biological monitors, and accessing the poles via bucket truck or climbing of the poles. In addition, the~~ qualified biological monitors, who will be responsible for avoiding impacts to nesting migratory birds (including burrowing owls) and drainages during construction through the use of appropriate mitigation measures, as determined by ~~the~~ a qualified monitoring biologist.

a. Would the project 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 U.S. Fish and Wildlife Service?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. A total of five species identified as endangered or threatened, candidate, sensitive, and special-status by the USFWS, CDFG, BLM, or covered under the WEMO were detected in portions of the Project area during surveys, including desert tortoise, California horned lark, loggerhead shrike, American peregrine falcon, and Mohave ground squirrel (Table B.3.4-1). There is a moderate to high potential for an additional thirteen special-status species to occur in portions of the Project area based on the presence of suitable habitat and known geographic ranges and distributions, including burrowing owl, American badger, desert kit fox, pallid bat, Townsend's big-eared bat, golden eagle, ferruginous hawk, Swainson's hawk, northern harrier, prairie falcon, crissal thrasher, Le Conte's thrasher, and Nelson's bighorn sheep (see Table B.3.4-1).

Construction impacts of the Proposed Project may affect species in a variety of ways. As described above, implementation of the Proposed Project would involve several different components. These include expansion of the Downs Substation; installation of 58 miles of fiber optic telecommunication cable on existing 115-kV subtransmission infrastructure; replacement of six subtransmission line poles; and undergrounding of approximately 5,650 feet of 115-kV cable.

The improvements at the Downs Substation would result in the direct loss to approximately 2.5 acres of creosote bush scrub. In addition, the installation of the new telecommunications cable and pole replacement would result in up to 1.14 acres of temporary impacts to native vegetation. SCE has indicated that, to the extent feasible, construction activities associated with the installation of the 58 miles of fiber optic telecommunication cable would be conducted by limiting work to existing roadways or previously disturbed areas. However, it is possible that the Proposed Project would result in temporary disturbance to natural lands to support stringing, pulling, or splicing activities. As described in Section B.1.11.3 (Overhead 115-kV Subtransmission Line Construction), the approximate area needed for stringing set-ups associated with wire installation is variable and depends upon terrain. Generally, pulling locations and equipment set-ups would be in direct line with the direction of the overhead conductors and established approximately a distance of three times the height away from the adjacent structure. Details of the cable and pole replacement activities are described below.

As described in Section B.1.11.4 (Fiber Optic Telecommunications System Construction), SCE has indicated that for the telecommunications cable installation activities, pulls can occur every 10,000 feet on straight runs (less around corners) and that the set-up, pulling, tensioning, and splicing activities,

where necessary, can be accomplished entirely within a single 60 foot by 40 foot area under the wires (SCE, 2012). A total of 48 potential pulling locations have been identified by SCE from aerial photography and mapped pole locations along the 58-mile telecommunications cable route. Locations were selected in previously disturbed areas where one was apparent. While these potential pulling locations may need to be adjusted based on field conditions, they are considered representative of the actual pulling locations to be determined in the field. Of the 48 pulling locations, 19 are on pavement, dirt roads, or as SCE indicates are characterized as heavily disturbed land barren of vegetation. Of the 29 remaining locations, 25 are at least partially on pavement, dirt roads, or heavily disturbed land barren of vegetation. The last four (4) locations are on land that appears to have undisturbed vegetation adjacent to Highway 178. SCE has indicated that alternate pulling locations may be determined in the field, and that field crews would work in smaller areas at those locations with native vegetation, to the extent feasible. Highway 178, further reducing the estimated disturbance area to as little as 9,600 square feet or 0.22 acres (SCE, 2012).

If these activities are not conducted along existing roadways, SCE has indicated that the Proposed Project may result in up to 0.22 acres of temporary disturbance to natural lands located along the overhead 115-kV subtransmission line route. In addition, each wood pole would require a hole to be excavated using an auger, backhoe, or by hand digging. The wood poles would be placed in temporary laydown areas at each pole location. The total area of disturbance from pole replacement activities is estimated to be 40,350 square feet or 0.92 acres (SCE, 2012).

Each of these activities poses a different risk to sensitive plants and wildlife based on the location of the activity, the type of habitat present, and the potential for the presence of sensitive plants or wildlife. For example, trenching or construction in disturbed habitat or along the disturbed shoulder of existing highways and surface streets often has a limited potential to adversely affect most species. Conversely, even vehicle travel on existing roads in areas supporting sensitive species such as desert tortoise or Mohave ground squirrel have the potential to result in road-kill.

SCE has indicated that, to the extent feasible, construction activities associated with the Proposed Project would occur in previously disturbed areas that have supported infrastructure and/or residential communities for decades, and as a result natural populations of special-status species, have declined in these areas. This, in addition to the minimally disruptive nature of the Proposed Project, which includes constructing in a developed area and stringing new fiber optic telecommunication cable along existing subtransmission line routes utilizing well-established roads, drastically reduces the probability that the Proposed Project would result in adverse effects to special-status species. Nonetheless, activities associated with the Proposed Project, including upgrade and expansion of the existing Downs Substation, replacement of six subtransmission poles, and installation of 58 miles of fiber optic telecommunication cable have the potential to result in significant short-term adverse impacts to special-status species, both directly and indirectly, absent mitigation.

Many of the potential impacts to species identified in Table B.3.4-1 could be avoided and/or minimized through implementation of APMs identified in Table B.3.4-2. These measures would be directly incorporated as part of the Project. In addition, impacts to special-status species or their habitat would be further reduced through the implementation of additional mitigation measures, as described below.

Special-Status Plants

Focused botanical surveys for rare plants were conducted by SCE within the Downs Substation expansion site in April 2010, and in April and May 2011. Focused botanical ~~Similar~~ surveys were also performed at the proposed pole replacement sites in April, May, and June 2011.

No special-status plant species were identified in the Project area, which includes the Downs Substation expansion area and the pole replacement sites, during the focused botanical surveys conducted by SCE. Due to relatively high levels of disturbance at the substation expansion and pole replacement sites, there is a low potential for some special-status plant species to occur. Additionally, suitable habitat for special-status plants was found to be limited along the existing subtransmission line corridor and immediately adjacent lands. Because suitable habitat is limited for special-status plants in the Project area and none were identified during the surveys, there remains a low potential for a special-status species to occur. SCE did not conduct focused botanical surveys along the subtransmission line corridor, as Project impacts would largely be isolated to disturbed roadways. However, some special-status plant species may colonize disturbed road edges and there remains a potential for special-status plant species to occur in adjacent habitat. In addition, natural lands located between the pole locations may support a variety of rare plants.

If present, direct impacts to special-status plant species may occur in a variety of ways, including the direct removal of plants during the course of construction activities. Clearing and grading associated with the substation expansion and pole replacements may also result in the alteration of soil conditions, including the loss of native seed banks and changes to the topography and drainage of a site such that the capability of the habitat to support special-status species is impaired. Dust from road travel, grading, or other construction activities may also reduce photosynthetic capacity in plants over time or inhibit reproduction by physically coating reproductive structures or excluding insect pollinators. Indirect impacts could include the creation of conditions that are favorable for the invasion of weedy exotic species that out-compete native species and prevent the establishment of desirable vegetation. These actions may result in reduced habitat quality for native plants. As such, impacts to special-status plants would be considered significant without mitigation.

The primary mechanism proposed by SCE to avoid impacts to sensitive plant species is to limit work as much as possible to disturbed habitat. However, the proposed substation expansion site, pole replacement areas, and underground cable locations do occur in areas supporting native and non-native vegetation. However, the conditions at these sites do not appear favorable to support most rare plants. In addition, rare plants were not detected at the substation expansion site or at the pole replacement sites, where focused surveys were conducted at a time when the detection of most rare plants was favorable. Similarly, approximately 3,105 feet of the proposed underground electrical line would be placed in unvegetated or developed areas.

The most likely location to encounter rare plants is within micro habitat associated with the proposed fiber optic telecommunication cable installation. However, SCE has indicated that all work associated with fiber optic telecommunication cable installation would be conducted along existing dirt and spur roads to the extent feasible. With the exception of limited disturbance to some natural lands where access from the roadway precludes safe construction practices no off-highway work would be authorized and road grading would not occur. Access to the poles would primarily be accomplished through the use of bucket trucks or similar equipment.

Although rare plants were not detected on the substation expansion site or along the proposed fiber optic telecommunication cable routes, irregular plant life histories and below-average rainfall limit the ability to conclude that rare plants are absent. Botanical field surveys can only detect individual plants whose above-ground growth is large or conspicuous enough to be noted by field personnel. Even under ideal conditions, some living plants may not have emerged above ground or may be too small for detection. These limitations are especially important for small or inconspicuous species.

To avoid and/or minimize impacts to special-status biological resources, SCE has committed to incorporating APMs BR-2 and BR-3 as part of the Project, which would require the development and implementation of a Worker Environmental Awareness Program (WEAP) and pre-construction biological clearance surveys for special-status species. SCE would also implement Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), B-3 (Conduct pre-construction surveys for special-status plants and implement avoidance measures), B-4 (Compensate for impacts to special-status plant species), B-5 (Develop a Habitat Restoration and Revegetation Plan), and AQ-1 (Implement Fugitive Dust Control Plan). These measures provide greater detail and reporting standards than the proposed APMs and would reduce or avoiding impacts to biological resources. Implementation of these measures would reduce impacts to a less-than-significant level.

Mitigation Measures for Biological Resources Protection

B-1 **Implement a Worker Environmental Awareness Program.** A Worker Environmental Awareness Program (WEAP) shall be implemented for construction crews by a qualified biologist(s) provided by SCE, where concurrence has been provided by the CPUC prior to the commencement of construction activities. Training materials and briefings shall include but not be limited to: discussion of the Federal and State Endangered Species Acts, Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act; the consequences of non-compliance with these acts; identification and values of plant and wildlife species and their habitats; fire protection measures; sensitivities of working on BLM lands; a contact person in the event of the discovery of dead or injured wildlife; and review of mitigation requirements. Training materials and a course outline shall be provided to the CPUC for review and approval at least 30 days prior to the start of construction. Maps showing the location of special-status wildlife, fish, or populations of rare plants, exclusion areas, or other construction limitations (i.e., limited operating periods) will be provided to the environmental monitors and construction crews prior to ground disturbance. SCE shall provide to the CPUC a list of construction personnel who have completed training prior to the start of construction, and this list shall be updated by SCE as required when new personnel start work. No construction worker may work in the field for more than 5 days without participating in the WEAP.

B-2 **Implement Best Management Practices (BMPs).** BMPs will be implemented as standard operating procedures during all ground disturbance and construction related activities to avoid or minimize Project impacts on biological resources. Compliance with BMPs will be documented and provided to the CPUC in a written report on a monthly basis during construction. The report shall include a summary of the construction activities completed, a review of the sensitive plants and wildlife detected, a list of compliance actions and any remedial actions taken to correct the actions, and the status of ongoing mitigation efforts. These BMPs will include but are not limited to the following:

a. Prior to ground disturbance of any kind, the Project work areas shall be clearly delineated by stakes, flags, or other clearly identifiable system. At the substation site, the area will be enclosed by tortoise proof fencing.

b. Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas when located in areas with habitat for desert tortoise, Mohave ground squirrel, and burrowing owl.

c. Speed limit signs, imposing a speed limit of 15 miles per hour, will be installed along the access roads of the Project alignment prior to initiation of site disturbance and/or

construction. To minimize disturbance of areas outside of the construction zone, all Project-related vehicle traffic shall be restricted to established roads, construction areas, and other designated areas. These areas will be included in preconstruction surveys and to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts. Off-road traffic outside of designated Project areas will be prohibited.

d. No vehicles or equipment shall be refueled within 100 feet of an ephemeral drainage. Spill kits shall be maintained on site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven and/or operated within or adjacent to drainages shall be checked and maintained daily to prevent leaks of materials.

e. All general trash, food-related trash items (e.g., wrappers, cans, bottles, food scraps, cigarettes, etc.) and other human-generated debris will be stored in animal proof containers and/or removed from the site each day. No deliberate feeding of wildlife will be allowed.

f. No firearms will be allowed on the Project site, unless otherwise approved for security personnel.

g. To prevent harassment or mortality of listed, special-status species and common wildlife, or destruction of their habitats, no domesticated animals of any kind shall be permitted in any Project area.

h. Use of chemicals, fuels, lubricants will be in compliance with all local, State and federal regulations. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation.

i. Any contractor or employee that inadvertently kills or injures a special-status animal, or finds one either dead, injured, or entrapped, will immediately report the incident to the on-site representative identified in the WEAP. The representative will contact the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), U.S. Department of the Interior Bureau of Land Management (BLM) (on BLM-administered lands) and the CPUC by telephone by the end of the day, or at the beginning of the next working day if the agency office is closed. In addition, formal notification shall be provided in writing within three working days of the incident or finding. Notification will include the date, time, location and circumstances of the incident. Any threatened or endangered species found dead or injured will be turned over immediately to CDFG for care, analysis, or disposition.

j. SCE shall avoid construction activities resulting in impacts to streambeds and the banks of any ephemeral drainage unless otherwise authorized through the context of a streambed alteration agreement.

k. All excavation, steep-walled holes or trenches in excess of six inches in depth that occur in desert tortoise or Mohave ground squirrel habitat shall be covered at the close of each working day with plywood or similar materials, or provided with one or more escape ramps constructed of earth dirt fill or wooden planks. Trenches will also be inspected for entrapped wildlife each morning prior to onset of construction activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they will be thoroughly inspected for entrapped wildlife. Any wildlife discovered will be allowed to escape before construction activities are allowed to resume, or removed from the trench or hole by a qualified biologist holding the appropriate permits (if required).

l. New light sources at the substation will be minimized, and lighting will be designed (e.g., using downcast lights) to limit the lighted area to the minimum necessary. See also Mitigation Measure V-3.

Mitigation Measures for Special-Status Plants

B-3 Conduct pre-construction surveys for special-status plants and implement avoidance measures. If construction activities are scheduled to begin within 24 months of the most recent focused botanical surveys (June 2011), then SCE shall conduct reconnaissance level surveys to identify potential rare plants that occur in the Project area. Any natural areas not subject to the focused surveys in 2011 shall be surveyed prior to ground disturbance during the time of year when rare plants may be detected. In the event that construction activities are initiated after 24 months following the most recent focused botanical surveys, SCE shall conduct pre-construction focused surveys to locate rare plants that may occur in the Project area. If, during activities associated with installation of the fiber optic telecommunication cable, it is determined that ground disturbance in any areas outside of existing access roads is required, SCE shall conduct focused botanical surveys within the area of disturbance and a 100 foot buffer prior to any ground disturbance.

The surveys shall be conducted during the appropriate blooming period(s) by a CPUC-approved plant ecologist/according to protocols established by the USFWS, CDFG, and California Native Plant Society (CNPS).

If during the course of surveys, any State or federally listed plants or plants identified as CNPS or California Rare Plant Rank (CRPR) List 1 or 2 are identified in or adjacent to the Project area, these locations shall be clearly marked and avoided through the implementation of appropriate buffer zones. The buffer zone ~~shall be~~ established around these areas ~~and~~ shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including human trampling, erosion, and dust. The size of the buffer depends upon the proposed use of the immediately adjacent lands, and includes consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, physical and chemical characteristics of soils) that are identified by a CPUC-approved plant ecologist and/or botanist. The buffer for herbaceous and shrub species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the USFWS, CDFG, and CPUC. Highly visible flagging shall be placed along the buffer area and shall be maintained ~~remain~~ in good working order during the duration of any construction activities in the area.

Where impacts to listed plants are determined to be unavoidable, the USFWS and/or CDFG shall be consulted for authorization. Additional mitigation measures to protect or restore listed plant species or their habitat, including but not limited to a salvage plan including seed collection and replanting, may be required by the USFWS or CDFG before impacts are authorized, whichever is appropriate.

B-4 Compensate for impacts to special-status plant species. If Project-related impacts result in the loss of more than 10 percent of the on-site population of any non-listed special-status plant species, compensatory mitigation will be required. Prior to the disturbance of habitat for or take of special-status plants/populations SCE must receive CPUC approval of preserved and/or mitigation lands as well as present documentation of recorded open space easement(s). Compensation will be required for all impacts that exceed the 10 percent threshold (e.g. impacts

to 15 percent of a population will only require compensation for 5 percent or the amount of impacts that exceed the 10 percent threshold). To compensate for permanent impacts to special-status plant species, habitat that is not already public land under resource protection shall be preserved and managed in perpetuity at a 1:1 mitigation ratio (one acre preserved for each acre impacted). Compensation for temporary impacts shall include land acquisition and/or preservation at a 0.5:1 ratio. The preserved habitat for a significantly impacted plant species shall be of equal or greater habitat quality to the impacted areas in terms of soil features, extent of disturbance, vegetation structure, and will contain verified extant populations, of the same size or greater, of the special-status plants that are impacted. Impacts could include direct impacts resulting from loss of habitat or indirect impacts if a significant population or portion thereof is unable to be avoided.

Habitat shall be preserved through the use of permanent open space easements or other open space mechanism acceptable to the CPUC. Mitigation lands cannot be located on land that is currently publicly held (i.e., BLM-administered lands) for resource protection.

B-5 Develop a Habitat Restoration and Revegetation Plan. The intent of this mitigation measure is to require SCE to restore all temporarily disturbed areas to pre-construction conditions or better and to prevent the colonization of noxious or invasive weeds. Should areas subject to temporary disturbance be dominated by invasive plants such as brome or Mediterranean grasses the area will be restored to similar conditions. If temporary disturbance occurs to barren areas such as vacant lots or dirt roads that do not support vegetation seeding, restoration shall not be required; however, weed monitoring for a minimum of one season would be required to ensure the construction activities did not result in the introduction of noxious or invasive weeds. Prior to the removal of any vegetation, the Applicant shall retain a CPUC approved qualified restoration biologist, knowledgeable in the area of restoration in the arid southwest, to prepare a Habitat Restoration and Revegetation Plan (HRRP). This biologist would also be responsible for monitoring the implementation of the plan as well as the progress on achieving the established success criteria. The HRRP will detail a process by which all temporarily disturbed areas are restored to pre-construction conditions or better. The plan shall include, at a minimum, the following items:

a. Locations and details for top soil salvage and storage – The HRRP shall identify areas within the construction footprint where topsoil:

   1) is present;

   2) supports native vegetation or acceptable non-native plants; and

   3) can be salvaged and stockpiled for replacement onto the site during revegetation activities.

   Where topsoil is present, but is wholly dominated by invasive non-native species such as Russian thistle, Sahara mustard, or other noxious plant species it will not be used in revegetation because the non-native seed bank would outweigh any benefit for revegetation the soil may have. Areas characterized as annual grassland or dominated by annual grasses will require topsoil salvage.

b. Figures depicting areas proposed for temporary disturbance – The HRRP shall include detailed figures indicating the locations of areas proposed for temporary disturbance such as the area near the proposed pole replacement, underground trenching areas, and any lands adjacent to

the substation site. These figures shall be updated, as necessary, to reflect current site conditions should they change.

c. Proposed species for restoration/revegetation – The species palate proposed for restoration/revegetation shall include a combination of native (based on current species composition in the restoration/revegetation areas) grasses, annual herbaceous species known to occur in the area, and native shrubs. The seed palate will be provided to the CPUC for approval prior to the implementation of the restoration.

d. Seed source and collection guidelines – If possible, seeds from stock within the Region, or from within a 25 mile radius will be collected to maintain local genetic integrity. If seed collection from these areas is not possible then a seed source must be obtained from a local seed supplier familiar with native species. Seed will be limited to the species and quantity specified in the seed mix palette prepared for the project. All seed will originate from the project region, within +/- 1,000 feet elevation of the Project site. The seed supplier chosen will provide a list of three references with the bid proposal. The references will include year, contact names, and telephone numbers. Seeds will be tested for percent purity, percent germination, number of pure live seeds per pound, and weed seed content. Seed testing will be the responsibility of the seed supplier.

e. Planting methodology – A description of the preferred methods proposed for seeding shall be provided (e.g., hydroseeding, drill seeding, broadcast seeding, etc.). Additionally, a discussion on timing of seeding, type of irrigation system proposed if any, potential need of irrigation, type and duration of irrigation, and erosion controls proposed for revegetation activities shall be included.

f. Invasive, non-native vegetation Control – A comprehensive Weed Control Plan will be developed in the HRRP. The Weed Control Plan will serve to prevent the type conversion of natural habitats to those dominated by invasive species known to occur in the area such as Russian thistle and Sahara mustard.

g. Monitoring program – Areas subject to restoration/revegetation shall be monitored to assess conditions and to make recommendations for successful habitat establishment. Monitoring will be performed by a CPUC qualified biologist(s), knowledgeable in the area of desert habitat restoration.

   i. Qualitative Monitoring – Qualitative monitoring surveys will be performed monthly in all restored/revegetated areas for the first year following planting in any phase of the Project. Qualitative monitoring will be on a quarterly schedule thereafter, until final completion approval of each restoration/revegetation area. Qualitative surveys will assess native plant species performance, including growth and survival, germination success, reproduction, plant fitness and health as well as pest or invasive plant problems. A CPUC qualified wildlife biologist will assist in monitoring surveys and will actively search for mammal, tortoise, and other wildlife use. Monitoring at this stage will indicate need for remediation or maintenance work well in advance of final success/failure determination. The monitoring reports will describe site progress and conditions and list all observations pertinent to eventual success, and make recommendations as appropriate regarding remedial work, maintenance, etc.

   ii. Quantitative Monitoring – Quantitative monitoring will occur annually for years one to five or until the success criteria are met.

Within each revegetation area, as shown in the figures referenced above, the biologist will collect data in a series of 1 m^2 quadrants to estimate cover and density of each plant species within the revegetated areas. Data will be used to measure native species growth performance, to estimate native and non-native species coverage, seed mix germination, native species recruitment and reproduction, and species diversity. Based on these results, the biologist will make recommendations for maintenance or remedial work on the site and for adjustments to the approved seed mix.

h. Success criteria – Criteria for successful restoration/revegetation of temporarily disturbed areas shall be 75 percent of pre-disturbance vegetative cover. This percentage shall include no more than a 10 percent non-native component, except where disturbance occurs in areas dominated by exotics, where the tolerance for exotics will be the same composition and percentage of pre-disturbance conditions with the exception of invasives such as Sahara mustard or Russian thistle.

i. Reporting – Reporting will include progress reports summarizing site status and recommended remedial measures that will be submitted by the biologist to the CPUC quarterly, with the exception of the site visits immediately preceding the development of each annual status report (see below). Each progress report will list estimated species coverage and diversity, species health and overall vigor, the establishment of volunteer native species, topographical/ soils conditions, problem weed species, the use of the site by wildlife species, significant drought stress, and any recommended remedial measures deemed necessary to ensure compliance with specified performance criteria.

   One annual site status report that summarizes site conditions will be forwarded by the biologist to the CPUC at the end of each year following implementation of this plan. Each annual report will list species coverage and diversity measured during yearly quantitative surveys, compliance/non-compliance with required performance standards, species health and overall vigor, the establishment of volunteer native species, hydrological and topographical conditions, use of the site by wildlife species, and the presence of invasive weed species. In the event of substantial non-compliance with the required performance criteria, the reports will include remedial measures deemed necessary to ensure future compliance with specified performance criteria. Each annual report will include, at the minimum:

   1) The name, title, and company of all persons involved in restoration monitoring and report preparation

   2) Maps or aerials showing restoration areas, transect locations, and photo documentation locations

   3) An explanation of the methods used to perform the work, including the number of acres treated for removal of non-native plants

   4) An assessment of the treatment success.

AQ-1 Implement Fugitive Dust Control Plan. (See full description under Air Quality, Section B.3.3)

Invasive, Non-Native, and Noxious Weeds

The spread of invasive plants is a major threat to biological resources in the Mojave Desert because these invasive non-native plants can displace native plants, increase the threat of wildfire, supplant wildlife foods that are important to herbivorous species, alter the habitat structure and ecological

function of wetland, riparian, and desert wash communities, and invade or threaten special-status plant occurrences and habitat (Zouhar et al., 2008; Lovich, 1998; Lovich et al., 1997, Lovich et al., 1996).

Construction activities and soil disturbance tend to introduce non-native invasive plant species into new areas and to facilitate their proliferation and spread. New introductions occur when seed are inadvertently introduced to a site, most often with mulch, hay bales, or wattles used for erosion control, or when they are transported on construction equipment or their tires from off-site areas. Many invasive non-native species are adapted to and promoted by soil disturbance (Lathrop & Archibald, 1980). Once introduced, they can out-compete native species because of minimal water requirements, high germination potential and high seed production (Beatley, 1966); can outcompete native annuals where nitrogen deposition (near highways) and precipitation rates are higher, leading to higher risk of wildfire (Allen et al., 2010), and can become locally dominant, representing a serious threat to native desert ecosystems (Abella et al., 2008).

Direct impacts from the introduction of noxious weeds could result in permanent alterations to the existing habitat by increasing vegetative cover that is not preferred by native species, creating a dense layer of vegetation that prevents native or favored vegetation from germinating, and altering the hydrological and soil conditions through nitrogen fixation. Noxious weeds can create such an unfavorable environment for wildlife that mutualistic species necessary for native plant life cycles, such as seed dispersers, burrowing mammals, or pollinators, are lost from the area.

Indirect impacts attributed to the colonization of noxious weeds could include a gradual decrease in natural biodiversity as noxious weed infestations may extirpate native plant or wildlife populations.

While the Project area already supports some degree of non-native species, the Proposed Project has the potential to increase the spread of noxious or invasive weeds primarily along the rural areas of Segments 1, 2, 3, and 4 of the 115-kV subtransmission line alignment for fiber optic telecommunication cable installation. While construction activities that result in soil disturbance would be limited; new introductions can occur when seed is inadvertently introduced to a site, through mulch, hay bales, or wattles used for erosion control, or when they are transported or dispersed to the site on equipment and vehicles. For the Proposed Project the introduction of weeds from vehicle travel is the most likely source of new infestations.

Although the potential introduction or spread of noxious and invasive weeds would occur primarily during construction activities, it would also continue to occur during operation and maintenance phases of the Proposed Project. Ongoing operational and maintenance impacts could include the facilitation of noxious weed establishment and spread as a result of increased vehicular and human traffic. Without control, weeds already present in the area would increase their abundance in soils disturbed by Project construction throughout the Downs Substation expansion site and along the linear facilities, and that construction equipment could accidently import new invasive species from off-site. Following establishment, new populations of weeds are often extremely difficult to eradicate. It may take several years or decades to re-establish the native soil structure and biota.

Project activities that result in the spread of noxious weeds or invasive and non-native plants would be considered significant absent mitigation. To minimize impacts related to the spread of noxious weeds, SCE would implement Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), B-3 (Conduct pre-construction surveys for special-status plants and implement avoidance measures), B-4 (Compensate for impacts to special-status plant species), B-5 (Develop a Habitat Restoration and Revegetation Plan), and B-6 (Prepare and implement a Weed Control Plan). This measure would require SCE to clean vehicles and equipment prior

to commencing work in off-road areas of the Project. Implementation of these measures would reduce impacts of the Proposed Project to less-than-significant levels.

Mitigation Measures for Invasive, Non-Native, and Noxious Weeds

B-1 Implement a Worker Environmental Awareness Program

B-2 Implement Best Management Practices (BMPs)

B-3 Conduct pre-construction surveys for special-status plants and implement avoidance measures

B-4 Compensate for impacts to special-status plant species

B-5 Develop a Habitat Restoration and Revegetation Plan

B-6 Prepare and implement a Weed Control Plan. The intent of this mitigation measure is to require SCE to develop a Weed Control Plan to respond to the colonization of noxious or invasive weeds that occur as a result on the Project. SCE shall prepare and implement a comprehensive, adaptive Weed Control Plan. The Weed Control Plan shall be submitted to the CPUC for final authorization of weed control methods, practices, and timing prior to implementation of the Weed Control Plan. On public lands, SCE shall submit the Weed Control Plan to the BLM for approval. The Weed Control Plan shall include the following:

a. A pre-construction weed inventory shall be conducted by surveying all areas subject to ground-disturbing activity, including, but not limited to the Downs Substation expansion site, access roads along the 115-kV subtransmission line routes, and in any area where vehicles will be parked or equipment used. Populations of noxious weeds shall be flagged for avoidance along all access roads where ground disturbance is not expected to occur. SCE shall not be responsible for removing or treating existing populations of noxious or invasive weeds in any areas that are not subject to ground disturbance. Weed populations that: (1) are rated High or Moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC, 2006), (2) aid and promote the spread of wildfires (such as cheatgrass and Saharan mustard), and (3) are considered by the BLM as species of priority (for BLM lands only) shall be mapped and described according to density and area covered. In areas subject to ground disturbance, weed infestations shall be treated prior to construction according to control methods and practices for invasive weed populations designed in consultation with the BLM (for BLM lands only). The Weed Control Plan shall be updated and utilized for eradication and monitoring post construction.

b. Weed control treatments shall include all legally permitted herbicide, manual, and mechanical methods. The application of herbicides shall be in compliance with all State and federal laws and regulations under the prescription of a Pest Control Advisor (PCA), where concurrence has been provided by the CPUC/BLM, and implemented by a Licensed Qualified Applicator. Herbicides shall not be applied in areas containing occupied Threatened, Endangered, Proposed, Candidate, and BLM Sensitive species without further analysis. Herbicides shall not be applied during or within 72 hours of a scheduled rain event. The timing of the weed control treatment shall be determined for each plant species in consultation with the CPUC, the CPUC-approved SCE Restoration Biologist, the BLM (on public lands), the county Agriculture Commissioners, and the California Invasive Plant Council (Cal-IPC) with the goal of controlling populations before they start producing seeds.

For the preconstruction and construction of the Project, measures to control the introduction and spread of noxious weeds in the Project work areas shall be taken as follows.

c. During Project preconstruction and construction, all seeds and straw materials shall be weed-free rice straw, and all gravel and fill material shall be certified weed free by the county Agriculture Commissioners' Offices. Any deviation from this will be approved by the CPUC/BLM. All plant materials used during restoration shall be native, certified weed-free, and approved by the CPUC and BLM.

d. During Project preconstruction and construction, vehicles and all equipment shall be washed (including wheels, undercarriages, and bumpers) before and after entering the work area. Vehicles staged in the work areas would only require re-treatment if they are exposed to high priority noxious weed populations or have left the work area. Vehicles shall be cleaned at existing construction yards or legally operating car washes. SCE shall document that all vehicles have been washed prior to commencing project work. In addition, tools such as chainsaws, hand clippers, pruners, etc. shall be washed before and after entering all Project work areas. All washing shall take place where rinse water is collected and disposed of in either a sanitary sewer or landfill, unless otherwise approved by the CPUC/BLM. A written daily log shall be kept for all vehicle/equipment/tool washing that states the date, time, location, type of equipment washed, methods used, and staff present. The log shall include the signature of a responsible staff member. Logs shall be available to the CPUC and BLM for inspection at any time and shall be submitted to the CPUC and BLM (on public lands only) on a monthly basis.

Special-Status Wildlife

Federally or State Listed as Threatened or Endangered

Two federally and/or State listed species, desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Spermophilus mohavensis*) are known to occur along portions of the subtransmission line alignment. ~~, were identified in the Project area during f~~ Focused surveys for these and other species were conducted by SCE in April 2010 and 2011 within the substation expansion site and in April, May, and June 2011 along the existing subtransmission line. No other federally and/or State listed wildlife species were identified in the Project area.

Desert tortoise. The desert tortoise, a federally and State listed threatened species, is known to occur in the Project area. Most of the project features including the access roads, substation expansion site, subtransmission line route and pole replacement area all occur within the geographic range of the desert tortoise. Federally designated critical habitat for desert tortoise does not occur within the proposed development footprint and would not be subject to Project impacts.

This species is an herbivore that may attain a carapace length of 9 to 15 inches. Desert tortoises inhabit semi-arid grasslands, gravelly desert washes, canyon bottoms, and rocky hillsides (USFWS 1994). Plant species play a major role in defining desert tortoise habitat. Creosote bush (*Larrea tridentata*), burrobush (*Ambrosia dumosa*), Mojave yucca (*Yucca schidigera*), and blackbrush (*Coleogyne ramosissima*) generally distinguish desert tortoise habitat. At higher elevations, Joshua tree and galleta grass (*Pleuraphis rigida*) are common plant indicators (USFWS, 1994). The presence of soil suitable for digging burrows is a limiting factor to desert tortoise distribution (USFWS, 1994). A single tortoise may have a dozen or more burrows within its home range, and different tortoises may use these burrows at different times.

The detection of this species if often difficult under the best of circumstances as a tortoise spends approximately 95 percent of its life in burrows. Typically, tortoises are active during the fall and spring and remain underground during the intense heat of the summer and during the height of the winter.

However, depending on weather conditions tortoise can be active at other times of the year, often in response to summer monsoons or mild weather.

Desert tortoise observations in the Project area recorded during focused and reconnaissance level surveys in 2010 and 2011 were limited to a juvenile carapace found underneath an active raven nest along the subtransmission line south of Ridgecrest and one class 3 scat (dried; no glaze or odor, signs of bleaching, tightly packed material). In addition, several scutes (i.e., the scale-like structures on the back of the tortoise shell - after many months the scales peel off of the bone), another raven nest, and the carapace of a large tortoise were detected in 2012. Each of these observations occurred along the existing subtransmission line corridor. No live individual tortoises or additional signs of presence, including active or inactive burrows, scat, or tracks were identified in the Project area; however, marginal habitat (including creosote bush-white bursage scrub) is present at the substation expansion site and suitable habitat occurs along the majority of the existing subtransmission line corridor.

While not detected within the substation expansion or pole replacement sites during surveys, there remains an extremely low potential for desert tortoise to occur at these locations. These areas have been subject to ongoing habitat loss and fragmentation and it is expected that tortoise densities near the substation are low. In addition to ravens, dogs have emerged as significant predators of the tortoise. The proximity to rural residences increases use of the habitat by dogs. Dogs may range several miles into the desert and have been found digging up and killing desert tortoises (USFWS, 1994a; Evans, 2001).

While these areas have been subject to ongoing development, the substation expansion site does remain partially connected to occupied habitat for this species. ~~If present,~~ It is unlikely that construction activities associated with the substation expansion site would result in direct or indirect impacts to desert tortoise. ~~and/or~~ Similarly, the pole replacement sites are located in small isolated patches of remnant habitat located between the existing highway and an active rail line. It is extremely unlikely that construction in this area could result in direct mortality, injury, or harassment of individuals as a result of encounters with vehicles or heavy equipment. ~~Other direct effects could include individual tortoises being crushed or entombed in their burrows, collection or vandalism, disruption of tortoise behavior during construction or operation of the facility, disturbance by noise or vibrations from heavy equipment, and injury or mortality from direct encounters with construction workers. Desert tortoises may also be attracted to the area by the application of water to control dust, placing them at higher risk of injury or mortality.~~

Desert tortoises are expected to occur on the subtransmission line route and their sign was observed along portions of the existing subtransmission line corridor during surveys. According to SCE data, the tortoise scat was detected approximately 130 feet north of the Inyokern-McGen-Searles #2 Transmission Line access road between Bedrock Spring Road and Milford Road (SCE, 2010a). Increased human activity and vehicle travel along access roads associated with the installation of new fiber optic telecommunication cable could disturb, injure, or kill individual tortoises, if present. Also, tortoises may take shelter under parked vehicles and be killed, injured, or harassed when the vehicles are moved. Vehicle traffic would increase as a result of the construction of the Proposed Project increasing the risk of injuring or killing desert tortoise and other wildlife. Other direct effects could include individual tortoises being crushed or entombed in their burrows, collection or vandalism, disruption of tortoise behavior during construction or operation of the facility, disturbance by noise or vibrations from heavy equipment, and injury or mortality from direct encounters with construction workers. Desert tortoises may also be attracted to the area by the application of water to control dust, placing them at higher risk of injury or mortality.

Stringing and pulling sites and other construction work areas located in previously undisturbed desert scrub ~~w~~could result in the loss of up to 1.14 acres of disturbance to desert tortoise habitat ~~for the desert tortoise~~. Although impacts in these areas would be restored after construction (per Mitigation Measure B-5), restoration of xeric habitats is challenging, and can take 50 to 100 years or longer to fully recover the functional values they supported prior to disturbance.

The use of access roads by construction and maintenance vehicles would result in accidental road-killed wildlife, if these species were to occur on roads during construction activities. Diurnal reptiles and small mammals such as desert tortoise, chuckwallas, badgers, and desert cottontails are the most likely to be subject to vehicle-caused mortality, although few if any wildlife species are immune to vehicle collisions.

Indirect impacts to desert tortoise could include soil compaction, the introduction of non-native and invasive plant species, and increased human presence along access roads. Construction would increase the number of substation structures that provide potential nest and perch sites for common ravens, which are known predators of juvenile tortoises.

Availability of perch sites and prey items has led to substantial increases of raven populations in desert regions, particularly near human development. Human activities in the Project area, including trash dumping and off-highway vehicle use potentially provide food or other attractants for which subsidize unnaturally high densities of tortoise predators, such as ravens, coyotes, and kit fox. Common raven populations in some areas of the Mojave Desert increased 1,500 percent from 1968 to 1988 in response to expanding human use of the desert (Boarman, 2002). Since ravens were scarce in this area prior to 1940, the current level of raven predation on juvenile desert tortoises is considered to be an unnatural occurrence (BLM, 1990; USFWS, 2008a).

Common ravens are known to nest and perch on subtransmission structures and are opportunistic predators that will prey upon wildlife species in the vicinity of existing subtransmission structures. However, raven population increases appear to be more associated with increased food supplies made available via human disposal (e.g., landfills, dumpsters, and litter) than access to perch sites (Kristan et al., 2004). In addition, perch sites in the proposed Project area do not appear to be a limiting factor as many of the existing towers are utilized by ravens and other birds as roosting sites. As such, ravens were commonly observed in the Project area and were identified during reconnaissance surveys in April 2011 utilizing an existing subtransmission pole as a nesting site at which a juvenile tortoise carapace, indicating predation, was also detected. Population increases, if they occur, are expected to be small and food supplies are not expected to change appreciably as a result of the Proposed Project. Therefore, increased predation on the desert tortoise, if present, is not expected to result from implementation of the Proposed Project.

Most of the construction activities associated with the Proposed Project would occur in previously disturbed areas that have supported infrastructure and/or residential communities for decades, and as a result natural populations of listed species, including desert tortoise, have severely declined in these areas. This, in addition to the minimally disruptive nature of the Project, which includes constructing in a residential area and stringing new fiber optic cable on existing subtransmission routes along well-established roads, reduces the probability that the Project would result in adverse effects to desert tortoise. Nonetheless it is possible that construction and the use of access roads in occupied desert tortoise habitat may result in direct impacts to desert tortoise.

To minimize the risks of increased traffic fatality and other hazards associated with roads, SCE has proposed the implementation of APMs BR-1, BR-3, and BR-5 that require preconstruction surveys, confining vehicular traffic to and from the project site to existing routes of travel, prohibiting cross-

country vehicle and equipment use outside designated work areas, and imposing a speed limit of 15 miles per hour within the project area. In addition, SCE would implement Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), B-3 (Conduct pre-construction surveys for special-status plants and implement avoidance measures), B-4 (Compensate for impacts to special-status plant species), B-5 (Develop a Habitat Restoration and Revegetation Plan), B-6 (Prepare and implement a Weed Control Plan), AQ-1 (Implement Fugitive Dust Control Plan), B-7 (Conduct presence or absence surveys for desert tortoise and implement avoidance measures), and B-8 (Compensate for impacts to desert tortoise and Mohave ground squirrel habitat). These measures would be implemented to ensure that impacts to desert tortoise are reduced to a less-than-significant level.

Mitigation Measures for Desert Tortoise

B-1 Implement a Worker Environmental Awareness Program

B-2 Implement Best Management Practices (BMPs)

B-3 Conduct pre-construction surveys for special-status plants and implement avoidance measures

B-4 Compensate for impacts to special-status plant species

B-5 Develop a Habitat Restoration and Revegetation Plan

AQ-1 Implement Fugitive Dust Control Plan. (See full description under Air Quality, Section B.3.3)

B-7 Conduct presence or absence surveys for desert tortoise and implement avoidance measures. SCE shall limit all activities within occupied or potentially occupied habitat for desert tortoise to existing access roads or cleared areas. Prior to ground disturbance at the Downs Substation expansion site, SCE shall implement the following actions.

a. The entire plant site shall be fenced with permanent desert tortoise-exclusion fence. To avoid impacts to desert tortoise during fence construction, the proposed fence alignment shall be flagged and the alignment surveyed within 24 hours prior to fence construction.

b. A USFWS, CDFG, and CPUC-approved qualified biologist shall conduct focused clearance surveys for desert tortoise prior to construction activities where any ground disturbance would occur within the substation expansion area. These surveys shall provide 100 percent coverage of all areas to be disturbed during fence construction and an additional transect along both sides of the proposed fence line. Clearance surveys shall follow the USFWS's desert tortoise survey protocol, as modified within the BLM's West Mojave Plan (WEMO) (BLM, 2005). This fence line transect shall cover an area approximately 90 feet wide centered on the fence alignment. Transects shall be no greater than 30 feet apart. The biologist shall then complete two clearance surveys to ensure tortoise are not present in the construction footprint.

c. A minimum of two clearance surveys, with negative results, must be completed, and these must coincide with heightened desert tortoise activity from late March through May and during October. To facilitate seeing the ground from different angles, the second clearance survey shall be walked at 90 degrees to the orientation of the first clearance survey.

d. If tortoises or intact active burrows are found in the impact area or if the authorized biologist determines that a tortoise may enter the construction site, SCE shall halt work within 500 feet

of the tortoise or burrow. No tortoise shall be handled or allowed to be disturbed by Project activities. If tortoises are detected at the substation expansion site, consultation with the USFWS and CDFG may be required and compensatory mitigation at no less than 1:1 will be required for the loss of native habitats.

e. A full time qualified biological monitor shall be present during initial ground disturbance at the substation expansion site to ensure desert tortoises are not encountered during excavation activities.

For the subtransmission line, pole replacement areas, and underground electrical installation SCE shall implement the following measures.

f. A USFWS, CDFG, and CPUC-approved qualified biologist shall conduct focused clearance surveys for desert tortoise prior to ground disturbance or any Project activity would occur within the subtransmission line right of way (i.e., fiber optic installation), pole replacement locations, and underground trenching.

g. A full time qualified biological monitor shall be required for each crew if multiple crews are working more than one mile apart.

h. If the biological monitor observes a desert tortoise on or within 500 feet of areas subject to trenching or at the pole replacement sites, work at the location where the animal was detected shall cease until approved by the CPUC, USFWS, BLM (BLM lands only) and CDFG in writing.

i. If the biological monitor observes a desert tortoise in any other area, determines that a desert tortoise was killed by Project-related activities during construction, or observes a dead desert tortoise, a written report shall be sent to CDFG, USFWS, and BLM (BLM lands only) within five calendar days. SCE shall notify the CPUC within 24 hours. The report will include the date, time of the finding or incident (if known), and location of the carcass and circumstances of its death (if known). Desert tortoise remains shall be collected and frozen as soon as possible, and CDFG/USFWS shall be contacted regarding ultimate disposal of the remains.

In addition the following protective measures shall be implemented by SCE.

j. Prior to the onset of construction activities, SCE shall provide all personnel who will be present on work areas within or adjacent to the Project area the following information:

    i. A detailed description of the desert tortoise including color photographs;

    ii. The protection the desert tortoise receives under the Endangered Species Act and possible legal action that may be incurred for violation of the Act;

    iii. The protective measures being implemented to conserve the desert tortoise and other species during construction activities associated with the Project; and

    iv. A point of contact if desert tortoises are observed.

k. All trash that may attract predators of desert tortoises will be removed from work sites or completely secured at the end of each work day.

l. The biologist will have the authority to stop all activities until appropriate corrective measures have been completed.

m. SCE shall restrict work to daylight hours during activities associated with the installation of new fiber optic telecommunication cable, except during an emergency, in order to avoid nighttime activities when desert tortoise may be present on the access road. Traffic speed shall be maintained at 15 mph or less in all work areas.

The resumes of the proposed biologists will be provided to the CDFG and CPUC for concurrence prior to conducting the surveys. The name and phone number of the biological monitor shall be provided to a CDFG/USFWS/BLM regional representative at least 14 days before the initiation of ground-disturbing activities.

B-8 **Provide off-site compensation for impacts to desert tortoise and Mohave ground squirrel habitat.** To mitigate potential long-term impacts to desert tortoise and Mohave ground squirrel (MGS) habitat from Project activities, SCE will acquire and protect, in perpetuity, habitat occupied by desert tortoise and MGS. The acquisition of mitigation lands shall be required for any disturbance occurring in areas supporting desert scrub or other native habitats that can support desert tortoise or MGS. For the purposes of this mitigation measure, temporary impacts to native vegetation shall be treated as permanent due to the challenges of restoring natural lands in arid environments. SCE shall acquire lands at a ratio of 1:1 (acres of habitat acquired:acres of land disturbed) for natural lands subject to vehicle crushing or vegetation mowing only, and at a ratio of 3:1 for clearing and grubbing between the InyoKern Substation and the Searles Substation. Compensatory mitigation is not required for disturbed lands immediately adjacent to Highway 178 or developed areas. Temporary impacts in these areas shall be restored in accordance with Mitigation Measure B-5. The mitigation areas must provide occupied habitat that is of equal or greater habitat quality compared to the impacted habitat, and must be located within the Western Mojave Recovery Unit for the desert tortoise, as defined in the U.S. Fish and Wildlife Service's *Revised Recovery Plan for the Mojave Population of the Desert Tortoise* (2011), and within the Mohave Ground Squirrel Conservation Area on private inholdings, as defined in the *Bureau of Land Management West Mojave Plan – A Habitat Conservation Plan and California Desert Plan Amendment* (2005), or other area approved by the CDFG, USFWS (for desert tortoise) and the CPUC. An open space easement shall be recorded on all property associated with the mitigation lands to protect existing resources in perpetuity. An open space easement could be held by CDFG or an approved land management entity and shall be recorded immediately upon the dedication or acquisition of the land.

Habitat shall be preserved through the use of permanent open space easements. Mitigation lands cannot be located on land that is currently publicly held for resource protection, or were previously acquired for use as mitigation lands for another project. Mitigation lands must:

a. Provide habitat for desert tortoise and MGS with capacity to regenerate naturally when disturbances are removed;

b. Be located near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation;

c. Have the potential to contribute to habitat connectivity and build linkages between known populations of desert tortoise, MGS, and/or other preserve lands;

d. Not have a history of intensive recreational use or other disturbance that might cause future erosion or other habitat damage, and make habitat recovery and restoration infeasible;

e. Not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration;

f. Not contain hazardous wastes that cannot be removed to the extent that the site could not provide suitable habitat;

g. Must provide wildlife movement value equal to that on the project site; and

h. Shall be contiguous and biologically connected to lands currently occupied by desert tortoise and MGS.

SCE shall either provide open space easements or provide funds for the acquisition of easements to a "qualified easement holder" (defined below). The CDFG is a qualified easement holder. To qualify as a "qualified easement holder" a private land trust must have:

a. Substantial experience managing open space easements that are created to meet mitigation requirements for impacts to special-status species;

b. Adopted the Land Trust Alliance's Standards and Practices; and

c. A stewardship endowment fund to pay for its perpetual stewardship obligations.

The CPUC shall determine whether a proposed easement holder meets these requirements.

SCE shall also be responsible for donating to the easement holder fees sufficient to cover: (1) Administrative costs incurred in the creation of the easement (appraisal, documenting baseline conditions, etc.) and (2) Funds in the form of a non-wasting endowment to cover the cost of monitoring and enforcing the terms of the easement in perpetuity. The amount of these administrative and stewardship fees shall be determined by the easement holder in consultation with the CPUC.

Open space easement(s) shall also be subject to the following:

a. The locations of acceptable easement(s) shall be developed with approval of CDFG and CPUC.

b. Be held in perpetuity by a qualified easement holder (defined above).

c. Be subject to a legally binding agreement that shall: (1) Be recorded with the County Recorder(s); and (2) Contain a succession clause for a qualified easement holder if the original holder is dissolved.

Documentation of recorded easement(s) shall be submitted to the CPUC, for review and approval, **prior to the issuance of the Notice to Proceed**. Verification of having met habitat mitigation requirements shall be reviewed and approved **prior to final inspection**.

Mohave ground squirrel (*Xerospermophilus mohavensis*). The Mohave ground squirrel (MGS), a State Threatened species, is rare throughout its range and is restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo Counties. This species inhabits desert areas, including alluvial

fans, basins, and plains with an abundance of native herbaceous vegetation. MGS can be found in Mojave creosote bush scrub, shadscale desert scrub, alkali scrub, and Joshua tree woodland. This species tends to avoid rocky areas and typically constructs burrows in sandy, alluvial, and gravelly soils (Best, 1995). Home range size averages approximately 0.91 acres and varies from 0.25 to 2 acres.

The MGS emerges from aestivation in spring, typically between mid-February and March, and actively forages for vegetation, seeds, arthropods, and fruit (Best, 1995) and tends to stay close to its burrow while foraging. Burrows are used for aestivation and hibernation, predator avoidance, and thermoregulation. The breeding season occurs soon after emergence, and gestation lasts approximately 30 days (Best, 1995). After acquiring fat stores for hibernation, MGS typically enter aestivation in July or August.

The MGS is known to be broadly distributed in the Project area, but is not expected to occur at the proposed Downs Substation expansion site. ~~and~~ Portions of the subtransmission line alignment span an important linkage area for this species ~~occurs~~ west of the Downs Substation site at the Dixie Wash. ~~The proposed fiber optic telecommunication cable alignment crosses this area, as do portions of the subtransmission line alignment.~~ Focused surveys were conducted by SCE in April 2010 and April, May, and June 2011 for this species. During these surveys one individual was identified along the western portion of the existing subtransmission line corridor in April 2010. Additionally, numerous occurrences have been reported from lands surrounding the Project area (CDFG, 2011b). Trapping for this species was also conducted at the proposed pole replacement sites and the Downs Substation expansion area. No MGS were observed or captured in these areas.

The SCE 2011 Biological Resources Technical Report indicated the highest density of small mammal burrow clusters occurs along Segment 4 as it traverses Highway 395 and turns north towards the Inyokern Substation. To a slightly lesser extent, burrows are also clustered along the Inyokern-McGen-Searles No. 2 transmission line just east of the city of Ridgecrest. Scattered mammal burrow clusters also occur along each of the subtransmission lines in the northeast corner of the Project area (SCE, 2011b).

Direct impacts to MGS, if present, include crushing of burrows, mortality due to road kill, and loss of habitat. Indirect impacts include degradation of habitat due to the spread of noxious weeds and dust.

Construction activities may result in take of individual MGS within suitable habitat, if present. The largest threat to MGS from implementation of the Proposed Project would be direct mortality due to collisions with vehicles on access roads during fiber optic telecommunication cable installation. Take from Project implementation may also stem from the loss of habitat due to ground-disturbing activities associated with the subtransmission pole replacement sites.

Similar to desert tortoise, the most likely potential for direct impacts to MGS is from collision with vehicles or equipment travelling through occupied habitat. The direct loss or disturbance of occupied habitat may also occur. SCE has indicated that, to the extent feasible, all work associated with fiber optic telecommunication cable installation would be conducted along existing dirt and spur roads. However, due to engineering constraints it is possible that some temporary work areas may be located within previously undisturbed desert scrub habitat, as described above for desert tortoise. In several locations the existing poles are located over 20 feet from an existing roadway, which may place engineering constraints on accessing the poles. Off-highway work would only be authorized in limited areas where stringing and pulling equipment cannot be placed within previously disturbed areas, and road grading would not occur. Access to the poles would be accomplished through the use of bucket trucks or similar equipment.

The implementation of these construction techniques would reduce the potential for direct loss of this species. However, it is possible that animals may be subject to inadvertent mortality through road kill, or loss of habitat. To reduce these potential impacts SCE has indicated that APMs BR-1, BR-2, BR-3, and BR-5 would be incorporated as part of Project development and would be implemented to avoid and/or minimize impacts to biological resources.

To provide further protection to MGS and ensure that clear enforceable protective measures are in place SCE would also implement the following mitigation measures, specific to MGS. These include Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), B-3 (Conduct pre-construction surveys for special-status plants and implement avoidance measures), B-4 (Compensate for impacts to special-status plant species), B-5 (Develop a Habitat Restoration and Revegetation Plan), B-6 (Prepare and implement a Weed Control Plan), AQ-1 (Implement Fugitive Dust Control Plan), B-8 (Compensate for impacts to desert tortoise and Mohave ground squirrel habitat), and B-9 (Avoid habitat and conduct construction monitoring for Mohave ground squirrel). Implementation of these measures would reduce impacts of the Proposed Project to less-than-significant levels.

Mitigation Measures for Mohave Ground Squirrel

B-1 Implement a Worker Environmental Awareness Program

B-2 Implement Best Management Practices (BMPs)

B-3 Conduct pre-construction surveys for special-status plants and implement avoidance measures

B-4 Compensate for impacts to special-status plant species

B-5 Develop a Habitat Restoration and Revegetation Plan

AQ-1 Implement Fugitive Dust Control Plan. (See full description under Air Quality, Section B.3.3)

B-8 Provide off-site compensation for impacts to desert tortoise and Mohave ground squirrel habitat.

B-9 Avoid habitat and conduct construction monitoring for Mohave ground squirrel. SCE shall limit all activities within occupied or potentially occupied habitat to existing access roads or cleared areas. Prior to ground disturbance at the Downs Substation expansion site, SCE shall implement the following actions:

a. SCE shall not disturb lands potentially occupied by the Mohave ground squirrel (MGS) unless the site has been cleared by trapping or approved by the CDFG and CPUC in writing.

b. A qualified biological monitor shall be on the site to survey for MGS during initial ground-disturbing activities at the substation expansion site and full time during all activities in any areas that support habitat for this species.

c. If the biological monitor observes a MGS on or within 500 feet of the substation site, work at the location where the animal was detected shall cease until approved by the CPUC and CDFG in writing.

d. If the biological monitor observes a MGS in any other area, determines that a MGS was killed by Project-related activities during construction, or observes a dead MGS, a written report shall be sent to CDFG within five calendar days. SCE shall notify the CPUC within 24 hours. The

report will include the date, time of the finding or incident (if known), and location of the carcass and circumstances of its death (if known). MGS remains shall be collected and frozen as soon as possible, and CDFG shall be contacted regarding ultimate disposal of the remains.

e. If MGS are detected at the substation site consultation with the CDFG may be required and compensatory mitigation at no less than 1:1 will be required for the loss of native habitats.

For the subtransmission line, pole replacement areas, and underground electrical installation SCE shall implement the following measures.

f. SCE shall limit all activities within occupied or potentially occupied habitat to existing access roads or cleared areas. If this is not possible, SCE shall avoid all potential MGS burrows by a minimum of 50 feet. This buffer may be adjusted with the approval of the CPUC and CDFG.

g. A CDFG, and CPUC-approved qualified biologist shall conduct focused clearance surveys for MGS prior to ground disturbance or any Project activity would occur within the subtransmission line right of way (i.e., fiber optic installation), pole replacement locations, and underground trenching.

h. A full time qualified biological monitor shall be required for each crew if multiple crews are working more than one mile apart.

i. If the biological monitor observes a MGS on or within 500 feet of areas subject to trenching or at the pole replacement sites, work at the location where the animal was detected shall cease until approved by the CPUC, USFWS, BLM (BLM lands only) and CDFG in writing.

j. If the biological monitor observes MGS in any other area, determines that a MGS was killed by Project-related activities during construction, or observes a dead MGS, a written report shall be sent to CDFG, and BLM (BLM lands only) within five calendar days. SCE shall notify the CPUC within 24 hours. The report will include the date, time of the finding or incident (if known), and location of the carcass and circumstances of its death (if known). MGS remains shall be collected and frozen as soon as possible, and CDFG shall be contacted regarding ultimate disposal of the remains.

In addition the following protective measures shall be implemented by SCE.

k. Prior to the onset of construction activities, SCE shall provide all personnel who will be present on work areas within or adjacent to the Project area the following information:

   i. A detailed description of the MGS including color photographs;

   ii. The protection the MGS receives under the California Endangered Species Act and possible legal action that may be incurred for violation of the Act;

   iii. The protective measures being implemented to conserve the MGS and other species during construction activities associated with the Project; and

   iv. A point of contact if MGS are observed.

l. All trash that may attract predators of MGS will be removed from work sites or completely secured at the end of each work day.

m. The biologist will have the authority to stop all activities until appropriate corrective measures have been completed.

n. SCE shall restrict work to daylight hours during activities associated with the installation of new fiber optic cable, except during an emergency, in order to avoid nighttime activities when MGS may be present on the access road. Traffic speed shall be maintained at 15 mph or less in all work areas.

The resumes of the proposed biologists will be provided to the CDFG and CPUC for concurrence prior to conducting the surveys. The name and phone number of the biological monitor shall be provided to a CDFG/USFWS/BLM regional representative at least 14 days before the initiation of ground-disturbing activities.

Nesting and Breeding Birds. The Project region is known to support a variety of State or federally protected bird species. These include golden eagles (State Fully Protected), American peregrine falcon (State Endangered), bald eagle (State Endangered and Fully Protected), Swainson's hawk (State Threatened), western snowy plover (Federally Threatened, State Species of Special Concern), and mountain plover (Federally Threatened).

If present in or adjacent to the Project alignment construction of the Proposed Project has the potential to result in disturbance to nesting birds. Direct impacts to nesting birds include ground-disturbing activities associated with construction of the Proposed Project, including the substation site, construction along the subtransmission line, at the pole replacement sites, and other areas from vehicle traffic, increased noise levels from heavy equipment, increased human presence, and exposure to fugitive dust. Construction during the breeding season could result in the displacement of breeding birds and the abandonment of active nests.

Indirect impacts to nesting birds include facility maintenance, human disturbance, the spread of noxious weeds and disruption of breeding or foraging activity due to facility maintenance or the inspection of the fiber optic line. However, with the exception of a few non-native birds such as European starling, the loss of active bird nests or young is regulated by the federal MBTA and Fish and Game Code Section 3503.

Golden eagles are known to occur in the region and have been observed foraging over and/or near the project site. These birds can have extremely large home ranges (i.e., over 162 Square miles) and would be expected to prey on many of the small mammal species that occur in project area. SCE did not identify golden eagles in the Project area during surveys; however, cliffs that represent suitable nesting habitat occur along portions of the existing subtransmission line. The substation expansion site or pole replacement area do not support suitable nesting habitat for this species. Potential foraging habitat occurs throughout the Project area, although foraging opportunities are limited at the substation expansion site and pole replacement area due to the proximity of development and human activity.

American peregrine falcons are known from the region and were observed by Aspen in the cliffs above the Poison Canyon area of the alignment in 2011. Potential foraging habitat occurs throughout the Project area, although foraging opportunities are limited at the substation expansion site and pole replacement area due to the proximity of development and human activity. Bald eagle is also known from the region but is not expected to occur in areas subject to project disturbance. This species appears to be associated with the treatment ponds located in Inyokern and is not expected to be subject to project impacts.

Swainson's hawk is known to occur as an occasional visitor in the region and one individual was recently (April 28, 2009) observed flying over the Ridgecrest Solar Power Project approximately five miles south of the City of Ridgecrest (CEC, 2009) and one was detected near Ridgecrest in April 2011 (Audubon, 2011). SCE indicated that one phase of the protocol-level surveys for Swainson's hawk was conducted

within the Project area in June 2011 and Swainson's hawk or nests were not identified during these surveys. Large trees bordering the substation expansion site provide potential nesting habitat for Swainson's hawk. Additionally, suitable nesting habitat occurs in Argus along the north end of the existing subtransmission line and the rocky slopes and cliffs to the west. However, this species is not known to nest in the Project area and the nearest known nesting population occurs in the Antelope Valley approximately 50 miles south of the project area. Foraging habitat for this species is present throughout the Project area.

Although Swainson's hawk was not detected in the Project area during focused surveys, there remains a low to moderate potential for this species to occur. Nesting activities are not expected in the Project area or in lands immediately adjacent to the Project area; however, this species may utilize the entire area for foraging. Mountain plovers nest in the Great Plains but spend winter in portions of Central California. They are also known from nest sites at Searles Lake near the community of Argus. This species is often associated with recently tilled agricultural fields and the shores and playas of dry lake beds. They are also known to roost in recently graded road beds.

Nesting

Impacts to these species would be considered significant absent mitigation. For example, some birds particularly golden eagles are sensitive to human encroachment, and if nests are disturbed by humans, nest abandonment will typically occur (Thelander, 1974). However, nest sites were not observed and the project site does not support nesting habitat. Golden eagles avoid developed areas, and the population in California has declined during the past century due to a decrease in open habitats (Grinnell and Miller, 1944). Similarly, nest sites for bald eagles and other large raptors were limited and no nest sites were detected at the substation site. Aspen observed a stick nest occupied by a raven on a tower and a large well tended stick nest was observed in Poison Canyon possibly occupied by Peregrine falcons; however, nest substrate for these species was sparse in the rural sections of the fiber optic alignment.

Foraging

The Proposed Project is not expected to result in the loss of important foraging habitat or disrupt known breeding or overwintering sites for any of these species. Construction activities, such as stringing fiber optic cable and increased human presence during this period, may temporarily disturb wintering species or flocks of birds should they occur in the alignment. However, these activities would not force animals from prime wintering or foraging areas. With the exception of the urban built substation, construction of the Proposed Project would not result in large areas of permanent habitat loss. Stringing of new fiber optic telecommunication cable would not be expected to result in the loss of foraging habitat and temporary impacts would be restored post construction. For golden eagles new regulations proposed by the USFWS indicate the USFWS may consider habitat loss to constitute substantial interference with normal breeding, feeding, or sheltering behavior, which would be considered a "take." Under the new regulation, the USFWS would require applicants to obtain incidental take permits for the golden eagles. The take would be authorized only for the incidental loss of birds from contact with facility structures, evaporation ponds or habitat loss. The permit would not be intended to allow the removal or disturbance of active nests. This species, is designated as "Fully Protected" (California Fish & Game Code §§ 3511) and thus may not be taken or possessed. However, as described above construction of the Proposed Project is not expected to result in substantial habitat loss for golden eagles or other foraging birds.

Collision and Electrocution

Birds are known to collide with communications towers, transmission lines, and other elevated structures. Estimates of the number of bird fatalities specifically attributable to interactions with utility structures vary considerably. Nationwide, it is estimated that hundreds of thousands to as many as 175 million birds are lost annually to fatal collisions with transmission and distribution lines (Erickson et al., 2001). In California, even general estimates are unavailable, although it is plausible that such collisions result in the deaths of hundreds of thousands of birds each year (Hunting, 2002).

Avian interactions with subtransmission lines and structures and the risks those interactions impose vary greatly by location within the Proposed Project area. Bird collisions with power lines generally occur when a power line or other aerial structure transects a daily flight path used by a concentration of birds, or migrants are traveling at reduced altitudes and encounter tall structures in their path (Brown, 1993). Collisions are more probable near wetlands, valleys that are bisected by power lines, and within narrow passes where power lines run perpendicular to flight paths. Passerines (e.g., songbirds) and waterfowl (e.g., ducks) are known to collide with wires (APLIC, 2006), particularly during nocturnal migrations or poor weather conditions (Avery et al., 1978).

Construction of the Proposed Project would not introduce any new significant collision or electrocution risk to listed or fully protected birds. The substation expansion would be constructed in areas not likely to support listed birds and the fiber optic telecommunication cable would be placed on an existing pole system. The addition of a new line is not expected to increase the collision risk in any measurable form. While birds could be electrocuted at the substation site, SCE would construct the facility in accordance with the Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (APLIC, 2006) per APM BR-4. This would minimize potential bird collisions and electrocutions with project components. Replacement of the six new poles would not substantially increase electrocution risk and SCE would also install these poles to Avian Power Line Interaction Committee (APLIC) guidelines. Therefore, impacts would be considered less than significant and no mitigation would be proposed.

To reduce potential impacts to nesting and foraging birds SCE would implement APMs BR-1, BR-2, BR-3, and BR-4. These include general avoidance measures, pre-construction surveys, worker training and constructing to APLIC standards. To provide more prescriptive measures to protect nesting birds SCE would implement Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), and B-10 (Conduct pre-construction surveys for nesting and breeding birds and implement avoidance measures). Implementation of these measures would reduce impacts of the Proposed Project to less-than-significant levels.

Mitigation Measures for Nesting and Breeding Birds

B-1 Implement a Worker Environmental Awareness Program

B-2 Implement Best Management Practices (BMPs)

B-10 Conduct pre-construction surveys for nesting and breeding birds and implement avoidance measures. Prior to any on-site disturbance (i.e., mobilization, staging, grading or construction), SCE shall retain a CPUC qualified biologist to conduct pre-construction surveys for nesting birds. Surveys for nesting birds shall be conducted within the recognized breeding season in all areas within 500 feet of the substation, staging areas, subtransmission lines, pole replacement areas, underground trenching sites, and access road locations. Surveys for raptors shall be conducted for all areas from February 1 to August 15. The required survey dates may be modified based on local conditions, as determined with the approval of the CPUC, USFWS, and CDFG.

If breeding birds with active nests are found prior to or during construction, a biological monitor shall establish a 300 foot buffer (500 feet for raptors) around the nest for ground-based construction activities and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. If nesting golden eagles are identified, a 0.5 mile no activity buffer will be implemented. The prescribed buffers may be adjusted to reflect existing conditions including ambient noise, topography, construction activity, and disturbance with the approval of the CPUC, CDFG and USFWS as appropriate. SCE may also elect to develop a programmatic approach to nesting bird buffers. If elected, SCE shall prepare a Nesting Bird Management Plan for submittal to the CDFG and USFWS for review and the CPCU for approval. The plan shall include at a minimum: the types of birds that may occur in the Project area; the proposed management strategy for nesting birds; the proposed buffer distances for nesting birds; monitoring, field survey requirements and reporting standards; and nest deterrence strategies. SCE shall also implement the following actions.

a. The biological monitor(s) shall conduct regular monitoring of the nest to determine success/failure and to ensure that project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails. The biological monitor(s) shall be responsible for documenting the results of the surveys and ongoing monitoring and will provide a copy of the monitoring reports for impact areas to the respective agencies.

b. If for any reason a bird nest must be removed during the nesting season, SCE shall provide written documentation providing concurrence from the USFWS and CDFG authorizing the nest relocation. Additionally the Applicant shall provide a written report documenting the relocation efforts. The report shall include what actions were taken to avoid moving the nest, the location of the nest, what species is being relocated, the number and condition of the eggs taken from the nest, the location of where the eggs are incubated, the survival rate, the location of the nests where the chicks are relocated, and whether the birds were accepted by the adopted parent.

c. If birds are found to be nesting in construction equipment, that equipment shall not be used, unless permission is obtained from the CDFG, USFWS, and CPUC, until the young have fledged the nest or, if no young are present, until after the breeding season has passed.

d. If any vegetation, trees or existing poles are to be removed as part of project related construction activities they will be done so outside of the nesting season to avoid additional impacts to nesting raptors. If removal during the nesting season can't be avoided then the biological monitor must confirm that the features do not contain nests or that the nest is vacant prior to its removal. If nests are found within these structures and contain eggs or young the biological monitor shall allow no activities within a 300 foot buffer for nesting birds and/or a 500 foot buffer for raptors (excluding golden eagle and condors, see above) until the young have fledged the nest.

Other Special-Status Wildlife Species

A total of two additional special-status wildlife species, including California horned lark and loggerhead shrike, were detected in and around the Project area during habitat assessments and focused surveys conducted by SCE in 2010 and 2011. The Project area also supports suitable habitat for a variety of other special-status species. Potential impacts to these species are discussed below.

Invertebrates

No special-status invertebrates have been recorded in the Project area and none are expected to occur.

Amphibians, Fish, and Reptiles

While a variety of sensitive amphibians, reptiles, and fish are known to occur in the Mojave Desert; these species are not known from the Ridgecrest area. While water is present in portions of Poison Canyon, construction activities would not occur in areas supporting standing water. In addition, the naturally occurring high concentrations of toxic minerals limit potential use of the site by fish and amphibians. Finally, no other special-status reptiles were identified during surveys in the Project area and none are expected to occur. Therefore, implementation of activities associated with the Proposed Project would not result in adverse impacts to special-status fish, amphibian species, or reptile species.

Birds

Prairie falcon, California horned lark, Loggerhead shrike, and Le Conte's thrasher. The open desert, small ephemeral drainages, and playas of the high desert provide foraging, cover, and breeding habitat for a variety of resident and migratory birds. During surveys of the project site SCE identified several sensitive bird species in the project area. These species included California horned lark and loggerhead shrike, which are considered California species of special concern. In addition several other sensitive birds may occur in the project area.

Prairie falcons breed throughout California, with the exception of the northwest corner and along the immediate coast (Steenhoff, 1998). This species is an uncommon resident that ranges from the southeastern deserts northwest through the Central Valley and along the inner Coast Ranges and Sierra Nevada. It is primarily associated with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas (Polite and Pratt, 2005). This species may occur throughout the Project area, primarily in natural lands, and is likely strongly associated with the rocky cliffs that occur near Poison Canyon on Segment 3.

California horned lark and loggerhead shrike were identified by SCE in the Project area during surveys. California horned lark can be locally abundant and are associated with the variety of desert vegetation communities. Loggerhead shrikes are uncommon residents throughout most of the southern portion of their range, including southern California. In the Mojave Desert this species appears to be most numerous in flat or gently sloping deserts and desert/scrub edges, especially along the eastern slopes of mountainous areas (Humple, 2008). Le Conte's thrasher inhabits some of the hottest and driest habitats in the arid southwest, including the deserts of southeastern California where they occur year-round. Preferred habitats include sparse desert scrub, alkali desert scrub, and desert succulent scrub habitats with open desert washes. The Le Conte's thrasher population densities are among the lowest of passerine (perching) birds, estimated at less than five birds per square kilometer in optimal habitats (Fitton, 2008). This low population density decreases the probability of their detection during field surveys.

Direct, indirect, and operational impacts to birds considered sensitive by the CDFG would be the same as for sensitive birds described above. With the exception of a few non-native birds such as European starling, the loss of active bird nests or young is regulated by the federal MBTA and Fish and Game Code Section 3503. Disturbance to nesting birds, including common species would be considered significant absent mitigation.

To reduce potential impacts to nesting and foraging birds SCE would implement APMs BR-1, BR-2, BR-3, and BR-4. These include general avoidance measures, pre-construction surveys, worker training and constructing to APLIC standards. To provide more prescriptive measures to protect nesting birds, SCE would implement Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), and B-10 (Conduct pre-construction surveys for nesting and breeding birds and implement avoidance measures). Implementation of these measures would reduce impacts of the Proposed Project to less-than-significant levels.

Burrowing owl (*Athene cunicularia*). In the Mojave Desert, burrowing owls generally occur at low densities in scattered populations, but they can be found in much higher densities near agricultural lands where rodent and insect prey tend to be more abundant (Gervais et al., 2008). Although this species was not identified in the Project area during focused Phase I and Phase II surveys conducted by SCE, suitable foraging habitat and California ground squirrel burrows that could provide breeding habitat occur throughout the Project area. This includes most of the Proposed Project area including the substation site, subtransmission line, and near the pole replacement areas where vegetative cover is low.

Direct impacts to burrowing owls could include the crushing of burrows, removal or disturbance of vegetation, increased noise levels from heavy equipment, increased human presence at construction sites and along access roads during new fiber optic line installation, and exposure to fugitive dust. Indirect impacts could include the loss of habitat due to the colonization of noxious weeds.

If burrowing owls are present within a construction zone, or adjacent to such an area, disturbance could destroy occupied burrows or cause the owls to abandon burrows. Construction during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. The loss of occupied burrowing owl habitat (habitat known to have been occupied by owls during the nesting season within the past three years) or reductions in the number of this rare species, directly or indirectly through nest abandonment or reproductive suppression, would constitute an adverse impact. Furthermore, raptors, including owls and their nests, are protected under both federal and State laws and regulations, including the federal MBTA and California Fish and Game Code Section 3503.5.

SCE has indicated that APMs BR-2, BR-3, BR-4, and BR-5 would be incorporated as part of Project development and would be implemented to avoid and/or minimize impacts to biological resources. While these measures are not specifically focused on the avoidance of burrowing owls; limiting construction to existing areas and conducting pre-construction surveys would reduce potential impacts to this species. These include general avoidance measures, pre-construction surveys, worker training and constructing to APLIC standards. To provide more prescriptive measures to protect burrowing owl, SCE would implement Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), B-10 (Conduct pre-construction surveys for nesting and breeding birds and implement avoidance measures), B-11 (Conduct focused pre-construction burrowing owl surveys and implement avoidance measures), and B-12 (Compensation for impacts to burrowing owl). Implementation of these measures would reduce impacts of the Proposed Project to less-than-significant levels.

Mitigation Measure for Other Protected Animal Species

B-1 Implement a Worker Environmental Awareness Program

B-2 Implement Best Management Practices (BMPs)

B-10 Conduct pre-construction surveys for nesting and breeding birds and implement avoidance measures

B-11 Conduct focused pre-construction burrowing owl surveys and implement avoidance measures. Concurrent with desert tortoise clearance surveys, SCE shall conduct pre-construction surveys for burrowing owls within the Downs Substation expansion site and along all linear facilities in accordance with CDFG guidelines (CBOC, 1993). No more than 15 days prior to the commencement of initial ground disturbing activities in any location that supports potential habitat, SCE shall implement focused pre-construction reconnaissance level surveys for burrowing owls. Surveys shall be conducted prior to the initiation of ground disturbance, the stringing of fiber optic line, or pole replacement. Surveys shall be conducted by a CPUC approved-qualified biologist(s), knowledgeable with the species. In conformance with federal and State regulations regarding the protection of raptors, surveys for burrowing owls shall be conducted in conformance with the California Burrowing Owl Consortium's 1995 protocols, which are recommended by the CDFG and consist of a minimum of three site visits. Surveys shall be completed within all areas proposed for ground disturbance and shall include the following avoidance measures:

a. Occupied burrows shall not be disturbed during the nesting season (1 February through 31 August) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Owls present on site after 1 February will be assumed to be nesting unless evidence indicates otherwise. This protected buffer area will remain in effect until 31 August, or based upon monitoring evidence, until the young owls are foraging independently or the nest is no longer active

b. Unless otherwise authorized by CDFG and the CPUC, a 250-foot buffer, within which no activity will be permissible, will be maintained between Project activities and nesting burrowing owls during the nesting season. This protected area will remain in effect until 31 August or based upon monitoring evidence, until the young owls are foraging independently. For burrowing owls present during the non-breeding season (generally 1 September to 31 January), a 150-foot buffer zone will be maintained around the occupied burrow(s).

c. If there is any danger that owls will be injured or killed as a result of construction activity, during the non-breeding season, the birds may be passively relocated. Relocation of owls during the non-breeding season will be performed by a qualified biologist using one-way doors, which should be installed in all burrows within the impact area and left in place for at least two nights. These one-way doors will then be removed and the burrows backfilled immediately prior to the initiation of grading. To avoid the potential for owls evicted from a burrow to occupy other burrows within the impact area, one-way doors will be placed in all potentially suitable burrows within the impact area when eviction occurs. However, these doors may only be placed with the written permission of the CPUC, CDFG and USFWS to ensure that owls are not trapped or buried in the burrow.

d. Any damaged or collapsed burrows will be replaced with artificial burrows in adjacent habitat at a 2:1 ratio. Design of the artificial burrows shall be consistent with CDFG guidelines (CDFG, 1995). SCE shall survey the site selected for artificial burrow construction to verify that such construction will not affect desert tortoise or Mohave ground squirrel. The design of the burrows shall be approved by the CPUC, CDFG and USFWS. If artificial burrows are required,

the project owner shall obtain by purchase the land required to support the burrows or ensure the burrows are located in an area such as the sub subtransmission line easement where construction/development would not occur.

B-12 Compensation for impacts to burrowing owl. Compensatory mitigation for permanent impacts to burrowing owls or their habitat will be provided in the form of habitat preservation and management. The following measures for compensatory mitigation shall apply only if burrowing owls are detected within the Project Disturbance Area (i.e., areas subject to permanent disturbance). The Project owner shall acquire, in fee or in easement, 19.5 acres of land for each burrowing owl that is displaced by construction of the Project. This compensation acreage of 19.5 acres per single bird or pair of nesting owls assumes that there is no evidence that the compensation lands are occupied by burrowing owls. If burrowing owls are observed to occupy the compensation lands, then only 9.75 acres per single bird or pair is required, per CDFG (1995) guidelines. If the compensation lands are contiguous to currently occupied habitat, then the replacement ratio will be 13.0 acres per pair or single bird. The Project owner shall provide funding for the enhancement and long-term management of these compensation lands. The acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPUC, in consultation with CDFG and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. The criteria for the mitigation lands are described below.

The mitigation land must provide suitable habitat for burrowing owls, and the acquisition lands must either currently support burrowing owls or be within dispersal distance from an active burrowing owl nesting territory (generally approximately 5 miles).

Mammals

The high desert region of the Mojave Desert is known to support a variety of sensitive mammals. Some of the rare mammals known, or with a potential to, occur in the Project area include American badger (*Taxidea taxus*), desert kit fox (*Vulpes macrotis arsipus*), Nelsons bighorn sheep (*Ovis canadensis nelsoni*), and several species of bats. These include pallid bat, Townsend's big-eared bat, western mastiff bat, and Yuma myotis. All these species have the potential to forage within the Project area, and some bat species utilize large areas for foraging. For example, the pallid bat is capable of flying more than 18 miles, although most foraging occurs within about two miles of the diurnal roost (Hermanson and O'Shea, 1983).

American badger and desert kit fox. American badgers were once fairly widespread throughout open grassland habitats of California. They are now uncommon, permanent residents throughout most of the State, with the exception of the northern North Coast area. Known to occur in the Mojave Desert, they are most abundant in the drier open stages of most shrub, forest, and herbaceous habitats with friable soils. In the southwest, badgers are typically associated with Mojave creosote bush scrub and sagebrush. Badgers are fossorial, digging large burrows in dry, friable soils and will use multiple dens/cover burrows within their home range. They typically use a different den every day, although they can use a den for a few days at a time (Sullivan, 1996). In undisturbed, high-quality habitat, badger dens can average 0.64 dens per acre, but are usually at much lower density in highly disturbed areas (Sullivan, 1996).

American badgers were not detected but are likely to occur in or adjacent to the Proposed Project area. Habitat in the Project area supports suitable foraging and denning areas for this species. Desert kit fox is

also expected to occur near the project area although dens were not observed in the project area. The desert kit fox, while not a special-status species, is protected under Title 14, California Code of Regulations (sections 670.2 and 670.5), and potential impacts to individuals of this species must be avoided.

Direct impacts to American badger and desert kit fox include mechanical crushing of individuals or burrows by vehicles and construction equipment, noise, dust, and loss of habitat. Construction activities could also result in the disturbance of badger maternity dens during the pup-rearing season (15 February to 1 July). However, with the exception of the substation site it is likely that direct loss of burrows would be avoided. It is possible that construction activities close to occupied burrows may result in abandonment. Project activities that result in the loss of young would be considered significant absent mitigation.

Indirect impacts to American badger and desert kit fox include alteration of soils, such as compaction that could preclude burrowing, alteration in prey base, and the spread of invasive plants. Operational impacts include risk of mortality by vehicle strikes on access roads by maintenance personnel, the spread of invasive plants, and disturbance due to increased human presence. Impacts of these types are also expected to be limited. With the exception of the substation site, trenching, and the pole replacement sites, SCE intends to limit disturbance to natural lands that occur along the proposed fiber optic line. This line would be attached to the existing subtransmission lines from existing access roads. Therefore, impacts would be limited with the implementation of mitigation.

SCE has indicated that APMs BR-2, BR-3, and BR-5 would be incorporated as part of Project development and would be implemented to avoid and/or minimize impacts to biological resources. While these measures are not specifically focused on the avoidance of badgers; limiting construction to existing areas and conducting pre-construction surveys would reduce potential impacts to badger and kit fox species. However, the following mitigation measures, specific to these species, would be implemented to ensure that impacts are reduced to a less-than-significant level. These include Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), B-3 (Conduct pre-construction surveys for special-status plants and implement avoidance measures), B-4 (Compensate for impacts to special-status plant species), B-5 (Develop a Habitat Restoration and Revegetation Plan), and B-6 (Prepare and implement a Weed Control Plan), and B-13 (Conduct focused pre-construction surveys for American badger and desert kit fox and implement avoidance measures). Implementation of these measures would reduce impacts of the Proposed Project to less-than-significant levels.

Mitigation Measures for American badger and desert kit fox

B-1 Implement a Worker Environmental Awareness Program

B-2 Implement Best Management Practices (BMPs)

B-3 Conduct pre-construction surveys for special-status plants and implement avoidance measures

B-4 Compensate for impacts to special-status plant species

B-5 Develop a Habitat Restoration and Revegetation Plan

B-6 Prepare and implement a Weed Control Plan

B-13 Conduct focused pre-construction surveys for American badger and desert kit fox and implement avoidance measures. No more than 30 days prior to the commencement of

construction activities, the SCE shall retain a CPUC biologist to conduct pre-construction surveys for American badger and desert kit fox within suitable habitat in the Project area. Biological Monitors shall perform pre-construction surveys for badger and kit fox dens in the Project area, including areas within 200 feet of all Project facilities, utility corridors, and access roads. If dens are detected, each den shall be classified as inactive, potentially active, or definitely active.

No disturbance to any dens shall be allowed in areas that may support desert tortoise or Mohave ground squirrel as tortoise are known to use a variety of mammal dens for shelter. An inactive den may be excavated by hand and backfilled to prevent reuse by badgers or kit fox will only be allowed at the Substation site after the site has been cleared of desert tortoise. Inactive dens that would be directly impacted by construction activities shall be monitored for future use. Potentially active dens that would be directly impacted by construction activities in any area that supports habitat for the desert tortoise or Mohave ground squirrel shall be monitored by the Biological Monitor for three consecutive nights using a tracking medium, such as diatomaceous earth or fire clay, and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, work may occur adjacent to the den.

If present, occupied dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens for badgers and kit foxes shall be avoided during the pup-rearing season (15 February through 1 July) and a minimum 200-foot buffer established. Buffers may be modified with the concurrence of CDFG and CPUC. Maternity dens shall be flagged for avoidance, identified on construction maps, and a biological monitor shall be present during construction.

If avoidance of a non-maternity den is not feasible, SCE shall be required to coordinate with the USFWS and CDFG to gain written approval for potential take of desert tortoise.

Pallid bat, Townsend's big-eared bat, and Spotted bat. These bats are all California Species of Special Concern that have the potential to occur within the Proposed Project area. Bats are known to utilize both natural features such as tree cavities and rock crevices and anthropogenic structures for roosts and potential hibernaculum. The Ridgecrest area supports a wide variety of potential roost sites for sensitive bats including abandoned houses, barns, bridges, and rail road trellises. Similarly, large trees (native and introduced) that posses cavities or exfoliating bark can support large numbers of bats. The steep walled canyons and rocky outcrops that occur at Poison Canyon contain varies caves, rock crevices, and old mines which provide year round habitat for some species. Foraging habitat for bats is present across most of the project area and insects attracted to the well watered soccer and baseball fields that occur immediately south of the proposed substation expansion site are likely frequented by various bats on a routine basis.

Direct impacts to bats if present could include mortality of individuals during construction activities, loss of foraging habitat due to construction of permanent structures (e.g., substation) or other construction activities, and temporary disturbance during construction (noise, air turbulence, dust, and ground vibrations from construction equipment). Bats that forage near the ground, such as the pallid bat, would also be subject to crushing or disturbance by vehicles driving at dusk, dawn, or during the night. Indirect effects include the loss of foraging habitat due to type conversion, night time lighting at the substation that exposes bats to predation, and alteration in prey bases.

The Proposed Project is not expected to result in the loss of maternity, day roosts, or hibernacula for sensitive bats. These features are not known to occur on the Project area, and while bats will utilize

large trees for day roosts, the habitat in the Project area (primarily creosote bush scrub) is not suited for this behavior. Caves, rock crevices, and old mines are likely present within Poison Canyon but permanent impacts to these areas would not occur and construction across this area would be limited to the installation of the new cross arm and fiber optic line to existing poles. Likewise, SCE would limit all fiber optic telecommunication cable stringing operations to existing roads and developed areas. Trenching for the underground electrical is not expected to disturb bats nor is the placement of the new poles near Searles Lake.

In general, bats are highly mobile and it is unlikely that construction activities would result in mortality of bats in the project area. Although bats forage in the project area, most activities will occur during daylight hours when the potential for bat interactions is limited. SCE has not proposed specific avoidance measures for bats and the likelihood of roosting bats occurring in any areas subject to project disturbance is low. Therefore, Project impacts would be less-than-significant and no mitigation is required.

Nelson's bighorn sheep. Within the WEMO planning area, there are 16 extant or historic bighorn sheep populations. Separate populations are defined by mountain range complexes. Five of these 16 areas no longer contain populations, three ranges have reintroduced populations, and two have been augmented with sheep from another population (BLM et al., 2005). Preferred habitat of bighorn is primarily on or near mountainous terrain above the desert floor. Access to surface water is another element of desert bighorn habitat important to population health.

Nelson's bighorn sheep were not observed during the 2010 or 2011 surveys and have a limited potential to occur in most of the Project area. The most likely areas to encounter this species is the bajadas that occur near the Poison Canyon area. This species is known from the Argus Mountains north of the Project area and may be an occasional visitor in the more remote sections of the subtransmission line.

Direct effects to Nelson's bighorn sheep are not expected to occur and foraging habitat for this species would not be effected by the Project construction. Direct effects could include disturbance from construction activities, noise, and human intrusion if construction occurs in an areas where sheep are present. Indirect impacts could include the degradation of habitat from the spread of noxious weeds, noise, dust, and lighting.

Based on the low intensity construction impacts identified by SCE (i.e., remaining on existing roads and no disturbance to native habitats along the fiber optic telecommunication cable alignment) direct and indirect impact to bighorn sheep are expected to be minimal. In addition, there are no known watering sites that would be affected by the proposed construction activities. However, if sheep are disturbed during the spring lambing season or are forced from low elevation areas along the subtransmission line these impacts would be considered significant absent mitigation. While there is evidence that in some circumstances, sheep may habituate to predictable human activity (Wehausen et al., 1977; Kovach, 1979), including highway traffic (Horesji, 1976), hiking (Hicks and Elder, 1979; Hamilton et al., 1982; Holl and Bleich, 1987), and aircraft (Krausman et al., 1998); in some circumstances sheep are known to abandon an area, either temporarily or permanently, when the limit of their tolerance to disturbance is exceeded (Welles and Welles, 1961; Light, 1971; Wehausen, 1980; Papouchis et al., 2001). However, construction through areas that may support occasional sheep will be short term and have limited disturbance.

SCE has indicated that APMs BR-2, BR-3, and BR-5 would be incorporated as part of Project development and would be implemented to avoid and/or minimize impacts to biological resources. While these measures are not specifically focused on the avoidance of bighorn sheep; limiting construction to

existing areas and conducting pre-construction surveys would reduce potential impacts to this species. However, the following mitigation measures, specific to bighorn sheep, would be implemented to ensure that impacts are reduced to a less-than-significant level through the avoidance of areas where bighorn sheep are identified. These include Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), B-5 (Develop a Habitat Restoration and Revegetation Plan), B-6 (Prepare and implement a Weed Control Plan), and B-14 (Conduct focused pre-construction surveys for Nelson's bighorn sheep and implement avoidance measures). Implementation of these measures would reduce impacts of the Proposed Project to less-than-significant levels.

Mitigation Measures for Nelson's Bighorn Sheep

B-1 Implement a Worker Environmental Awareness Program

B-2 Implement Best Management Practices (BMPs)

B-5 Develop a Habitat Restoration and Revegetation Plan

B-6 Prepare and implement a Weed Control Plan

B-14 Conduct focused pre-construction surveys for Nelson's bighorn sheep and implement avoidance measures. All construction activities within 500 feet of Nelson's bighorn sheep shall cease until the animals have moved farther than 500 feet away from construction activities. This buffer may be modified with the approval of the CPUC, BLM (on BLM lands), and CDFG.

SCE shall notify the CPUC, BLM, and CDFG in writing within 48 hours if any bighorn sheep are noted in the Project area.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The CDFG (2003) recognizes several vegetation associations in the central Mojave desert as "communities either known or believed to be of high priority for inventory" in the CNDDB. Vegetation associations that met the criteria for sensitive or high priority were not present on or adjacent to the Proposed Project. Vegetation in the Project area is common to the region and the washes crossed by the Proposed Project do not support microphyll woodlands, riparian, or desert wash vegetation.

Approximately 2.5 acres of disturbed creosote bush-white bursage scrub community would be permanently converted as a result of the expansion of the Downs Substation. Some common plant communities such as creosote bush–white bursage vegetation are common in the Mojave Desert. While this association is common, sites where it occurs with big galleta grass are either rare or are poorly inventoried. Thus, the creosote bush–white bursage–big galleta association is considered a community with high inventory priority. Creosote bush–white bursage is present along much of the fiber optic telecommunication cable alignment in the western portions of the Proposed Project. However, Aspen reviewed these areas and did not note the presence of the sensitive creosote bush-white bursage-big galleta association.

Microphyll woodlands and desert wash vegetation are also considered sensitive communities. However, communities such as Mojave wash scrub and Mojave Desert wash scrub as described by Holland (1986) were not detected in the Proposed Project area and would not be subject to Project disturbance.

Construction of the Proposed Project would avoid disturbance to sensitive habitats. In addition, SCE has proposed to restore temporary disturbed areas which would reduce potential indirect impacts to sensitive vegetation from the colonization of noxious or invasive weeds.

SCE has indicated that APMs BR-2, BR-3, and BR-5 would be incorporated as part of Project development and would be implemented to avoid and/or minimize impacts to biological resources. In addition, the following Mitigation Measures would be implemented to ensure that impacts are reduced to a less-than-significant level through the implementation of best management practices and restoration. These include Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), and B-5 (Develop a Habitat Restoration and Revegetation Plan). This includes avoiding all impacts to sensitive habitats and limiting construction to developed or disturbed areas. Implementation of these measures would reduce impacts of the Proposed Project to less-than-significant levels.

c. Would the project 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.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Surveys for the presence of jurisdictional waters were conducted for the Project by SCE in April 2010 and May, June, and July 2011. Based on those survey results, SCE has indicated that no areas meeting the definition of "Waters of the U.S." defined by Section 404 of the Clean Water Act appear to occur in the Project area. Therefore, adverse impacts to federally protected wetlands as defined by Section 404 of the CWA would not occur.

All water that enters the watershed either infiltrates into the underlying groundwater basin, or flows toward two playa lakes located near the center of the watershed. The Proposed Project area is located within the Indian Wells-Searles Valleys Watershed. These basins are closed and internally drained; surface water in the Project area flows to China Lake and Searles Lake respectively. Construction of the Proposed Project would not directly affect any of the ephemeral streams and washes that bisect the various access roads that occur on the subtransmission lines. However, vehicles would be required to cross these features to gain access to the existing subtransmission line right-of-way. While SCE has indicated these would not be considered as State jurisdictional waters; concurrence from the CDFG has not been provided.

Many of these features support clear evidence of flow during rainfall events and the CDFG often considers these drainages to be under their jurisdiction. In addition, the alignment crosses a wetted portion of Poison Canyon Creek near the western mouth of Poison Canyon. Provided SCE does not alter the bed or banks and does not operate equipment in these areas during times when ponded or flowing water is present impacts would be considered less than significant. However, as required by law, SCE would comply with the regulations regarding conducting Project activities in water bodies under the jurisdiction of the State and federal government. As such SCE would be required to either obtain required permits pursuant to Section 401 and 404 of the CWA and the State Porter-Cologne Act and CDFG Code 1602 or provide written concurrence from the US Army Corps of Engineers (USACE) and CDFG that these water bodies do not fall under the jurisdiction of the State or federal governments.

Direct impacts to ephemeral drainages that may meet the criteria of jurisdictional waters could include the discharge of fill, degradation of water quality, and increased erosion and sediment transport. Most of these impacts would occur only if water or ponded water is present. SCE has indicated that no grading or blading of the channels would occur. However, in response to strong winter storms some of these

areas may require grading to maintain access. Indirect impacts could include alterations to the existing topographical and hydrological conditions and the introduction of non-native, invasive plant species.

To reduce potential impacts to potential waters of the State SCE would implement APMs BR-2, BR-3, and BR-5. However, these measures do not specify what actions would be taken and do not have requirements. As a matter of law, SCE would provide evidence that the CDFG does not consider these areas as jurisdictional. However, the following Mitigation Measures would be implemented to ensure that impacts are reduced to a less-than-significant level through the implementation of best management practices and restoration. These include Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), and B-5 (Develop a Habitat Restoration and Revegetation Plan). This includes avoiding all impacts to sensitive habitats and limiting construction to developed or disturbed areas. Implementation of these measures would reduce impacts of the Proposed Project to less-than-significant levels.

d. Would the project 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 wildlife nursery sites?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. Wildlife corridors provide a variety of functions and can include habitat linkages between natural areas; provide greenbelts and refuge systems; and divert wildlife across permanent physical barriers to dispersal such as highways and dams by roadway underpasses and ramps (Hass, 2000; Simberloff et al., 1992). Generally, the accepted definition of a wildlife corridor is an area of habitat (often a large linear feature) that is embedded in a dissimilar matrix of different habitat types that provides connectivity between two or more larger blocks of habitat (Beier and Noss, 1998). Noss (1987) also suggests several potential advantages to corridors, including increased species richness and diversity, decreased probability of extinction, maintenance of genetic variation, a greater mix of habitat and successional stages, and alternative refugia from large disturbances.

The Proposed Project crosses at least two geographically important wildlife movement areas including Poison Canyon and the Little Dixie Wash area. These locations are considered important live-in habitat and movement areas for desert tortoise and MGS. Bighorn sheep may also move south from the Argus Mountains crossing near Poison Canyon. However, construction of the Proposed Project would result in the permanent obstruction of any movement corridors. The proposed Substation would be constructed in an area best defined as the rural/urban interface and is not located in an important area that would support wildlife movement. Likewise, use of substation expansion site as an important nursery area is low.

The placement of the new fiber optic line on the existing subtransmission lines, the replacement of six poles near Searles Lake, and the undergrounding of portions of the 115-kV subtransmission lines would also not result in a new barrier to wildlife movement. While the addition of the fiber optic telecommunication cable would increase the number of lines currently attached to the poles, this is not expected to substantially alter baseline conditions. Due to the intermittent locations of construction activity and its temporary nature, wildlife would not be physically prevented from moving around Project equipment. During Project operation, the added line would not physically obstruct wildlife movement; wildlife could move under and around the towers as they currently do.

Some temporary disturbance may occur during construction activities and the use of existing access roads. Mobile wildlife would be able to respond to construction activities by moving to adjacent habitats, if available, and as many large species move during the evening or early morning when

construction activities would be limited, construction would not interfere with their movement. In addition, barriers that could disrupt tortoise movement would not be constructed and SCE would not grade or alter the existing access roads.

The replacement of the new towers and the installation of the new fiber optic telecommunication cable is also not expected to adversely affect or interfere with aerial migratory movements of birds or bats The new fiber optic telecommunication cable would be considered a minor addition to the existing lines already present. This addition is not expected to pose substantial threat of collision or substantially increase the potential for birds or bats to collide with the new lines. In addition, the new Downs Substation expansion and the new poles in the Searles Valley are not expected to substantially alter existing habitat conditions or pose new barriers to movement for wildlife.

To reduce potential impacts to wildlife movement and to protect native nursery site SCE would APMs BR-2, BR-3, and BR-5. However, these measures do not provide specific actions to ensure wildlife movement remains unimpeded nor do they contain reporting or performance standards. For these reasons, as well as the value of these resources to wildlife species such as the desert tortoise, bighorn sheep, and birds SCE shall implement Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), B-3 (Conduct pre-construction surveys for special-status plants and implement avoidance measures), B-4 (Compensate for impacts to special-status plant species), B-5 (Develop a Habitat Restoration and Revegetation Plan), B-6 (Prepare and implement a Weed Control Plan), B-7 (Conduct presence or absence surveys for desert tortoise and implement avoidance measures), B-8 (Provide off-site compensation for impacts to desert tortoise and Mohave ground squirrel habitat), B-9 (Avoid habitat and construction monitoring for Mohave ground squirrel), B-10 (Conduct pre-construction surveys for nesting and breeding birds and implement avoidance measures), B-11 (Conduct focused pre-construction burrowing owl surveys and implement avoidance measures), B-12 (Compensation for impacts to burrowing owl), B-13 (Conduct focused pre-construction surveys for American badgers and desert kit fox and implement avoidance measures), and B-14 (Conduct focused pre-construction surveys for Nelson's bighorn sheep and implement avoidance measures). These measures would ensure that impacts to potential wildlife movement would remain less than significant.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

NO IMPACT. SCE does not plan to remove any native tree protected by any local polices or ordinances. If any variation is required that could potentially affect locally protected trees, SCE would be required by law to seek approval from the local regulatory agency before proceeding. Therefore, no additional mitigation is recommended.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State habitat conservation plan?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The Proposed Project is located in the West Mojave Plan Area. As an amendment to the CDCA Plan, the BLM produced the WEMO (BLM, 2006). The WEMO is a federal land use plan amendment that (1) presents a comprehensive strategy to conserve and protect desert tortoise, MGS, and nearly 100 other plants and animals and the natural communities of which they are part, and (2) provides a streamlined program for complying with the requirements of the California and federal "Endangered Species Acts" (BLM et al., 2005). The Proposed Project is also

subject to the provisions of the Kern County General Plan, and the City of Ridgecrest General Plan Conservation Element 1991-2010 (City of Ridgecrest, 1991).

For compliance with BLM's existing ROW grants, in June 2010, SCE filed two separate Applications for Transportation and Utility Systems and Facilities on Federal Lands (referred to as an SF-299 application) with BLM in which SCE requested authorization to consolidate the existing the ROW grants into a single grant and to amend the grants to allow the addition of fiber optic telecommunication cables to the existing 115-kV subtransmission poles, and replacement of one existing wood pole (the other five poles to be replaced are located on private land) on the 115-kV subtransmission route. BLM determined the addition of the fiber optic cable does not constitute a substantial deviation because the Project would not be changing the use or location of the authorized ROW (BLM, 2011). The criteria for substantial deviation as defined by 43 CFR 2807.20(a), states that "you must amend your application or seek amendment of your grant when there is a proposed substantial deviation in location or use." SCE is not meeting this definition for the Proposed Project; therefore, an amendment is not required (BLM, 2011).

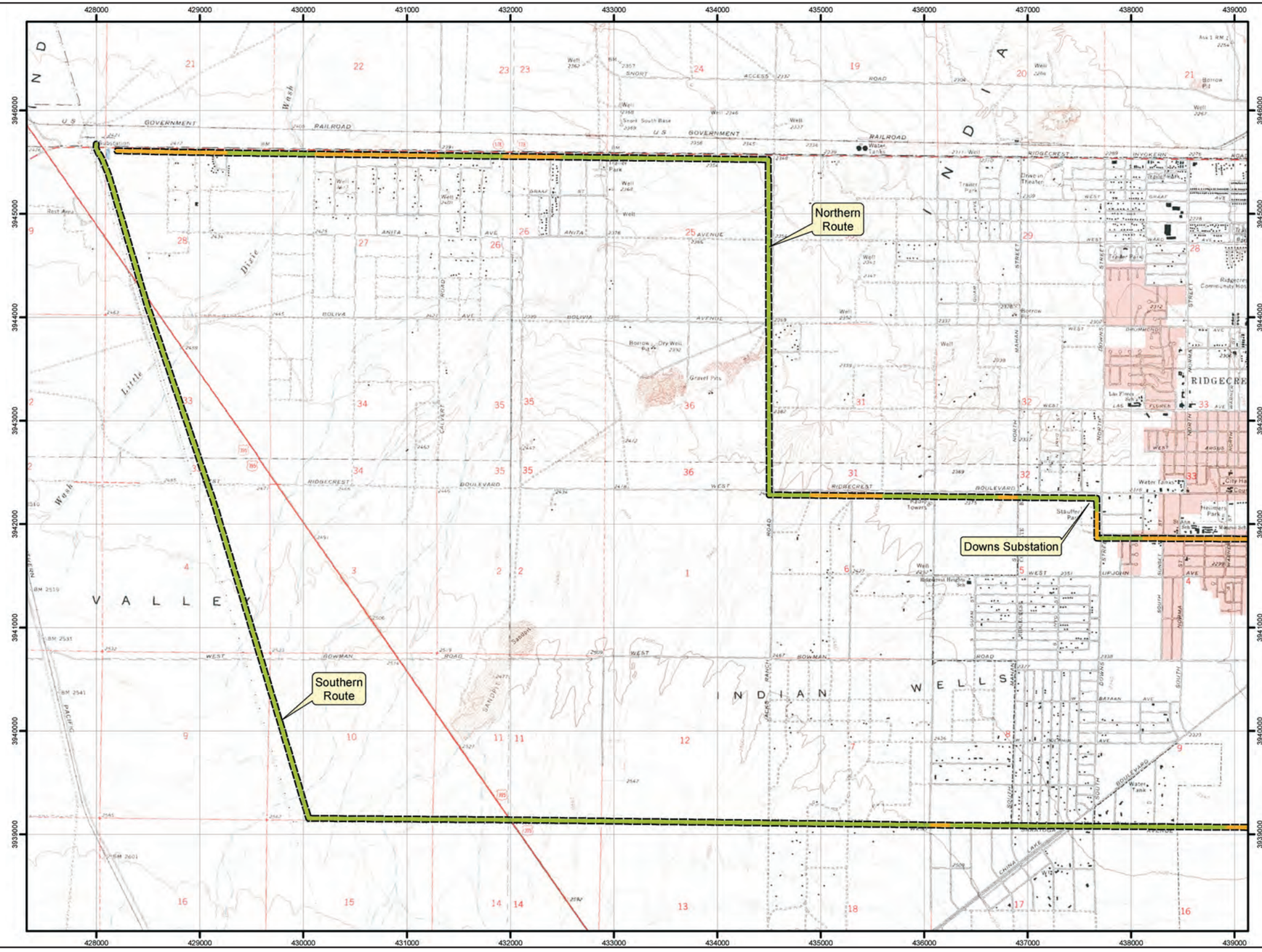
BLM noted that SCE will need to request a Notice to Proceed and must provide the following documentation to the BLM's Ridgecrest Field Office prior to proceeding with construction: (1) A clearance document from California Fish and Game for the Mohave Ground Squirrel, and (2) An Encroachment permit from CalTrans for the pole located on public lands (BLM, 2011). Mitigation Measure L-1 (File a Notice to Proceed) requires that the Notice to Proceed is filed at least 30 days prior to the start of construction. Within implementation of this measure, the Proposed Project would not conflict with BLM regulations.

With the implementation of the mitigation measures identified for the Proposed Project construction and development of the Proposed Project would not conflict with the conservation strategies identified in the WEMO, Kern County General Plan, or the City of Ridgecrest General Plan Conservation Element.

These measures include APMs BR-1, BR-2, BR-3, BR-4, and BR-5. In addition, the CPUC has proposed the following mitigation measures. These include Mitigation Measures B-1 (Implement a Worker Environmental Awareness Program), B-2 (Implement Best Management Practices), B-3 (Conduct pre-construction surveys for special-status plants and implement avoidance measures), B-4 (Compensate for impacts to special-status plant species), B-5 (Develop a Habitat Restoration and Revegetation Plan), B-6 (Prepare and implement a Weed Control Plan), B-7 (Conduct presence or absence surveys for desert tortoise and implement avoidance measures), B-8 (Provide off-site compensation for impacts to desert tortoise and Mohave ground squirrel habitat), B-9 (Avoid habitat and construction monitoring for Mohave ground squirrel), B-10 (Conduct pre-construction surveys for nesting and breeding birds and implement avoidance measures), B-11 (Conduct focused pre-construction burrowing owl surveys and implement avoidance measures), B-12 (Compensation for impacts to burrowing owl), B-13 (Conduct focused pre-construction surveys for American badgers and desert kit fox and implement avoidance measures), and B-14 (Conduct focused pre-construction surveys for Nelson's bighorn sheep and implement avoidance measures). These measures would ensure that impacts of the Proposed Project do not conflict with the requirements of any adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State habitat conservation plan.

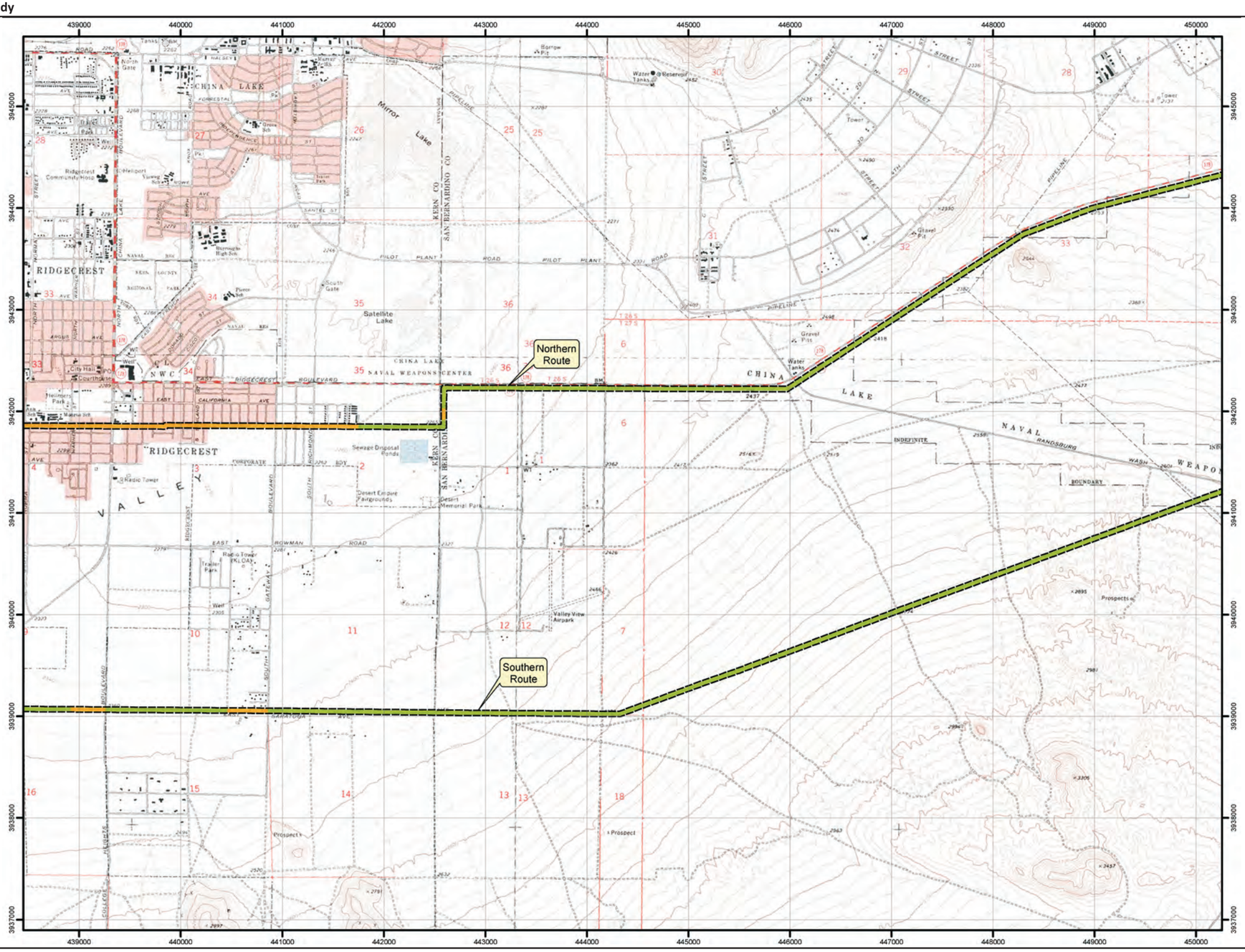
Source: Edison, 2010.

Figure B.3.4-1
Downs Substation Vegetation Communities



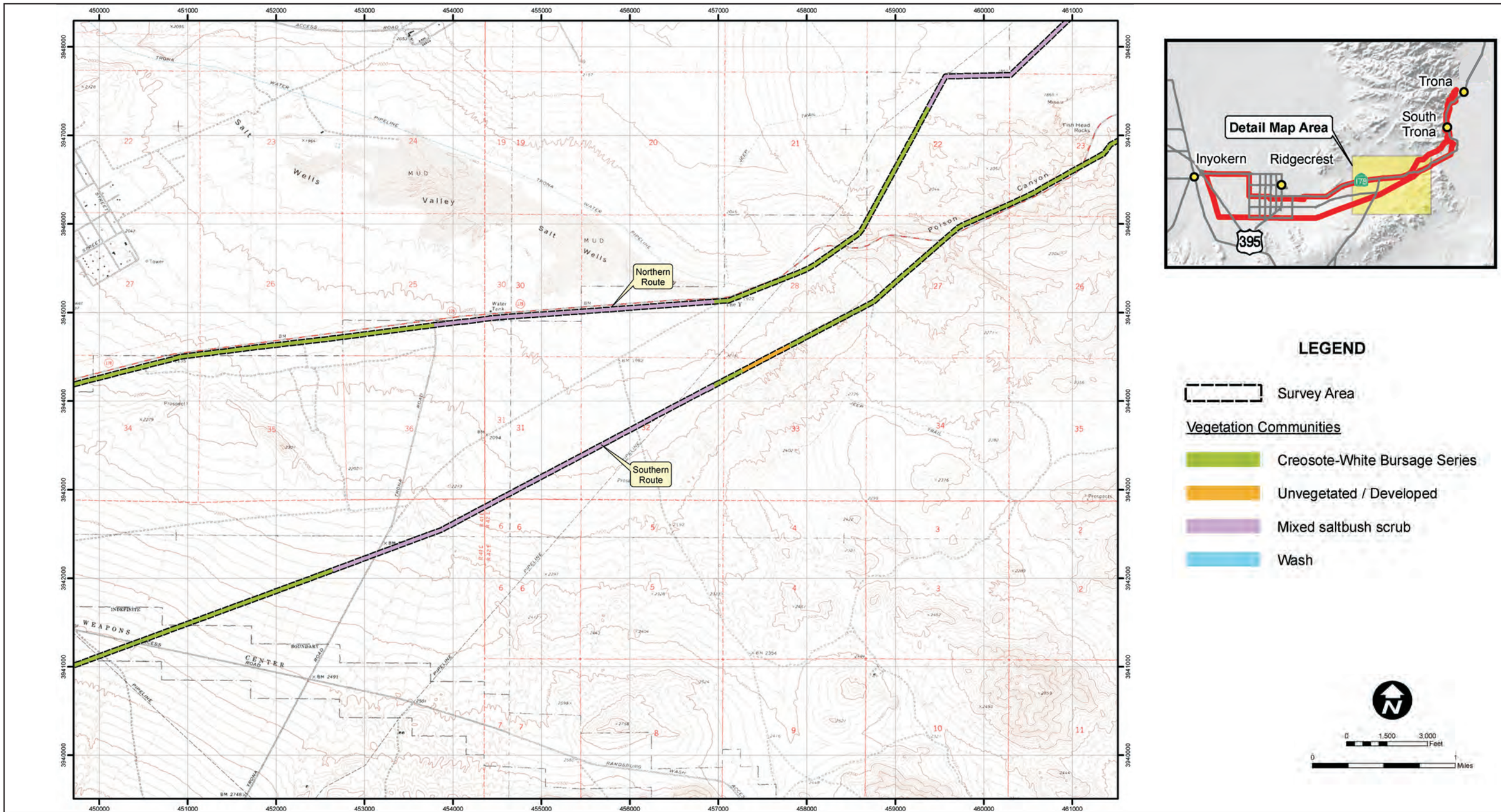
Source: Edison, 2010.

Figure B.3.4-2 (Revised)
Vegetation Communities
Western Project Area



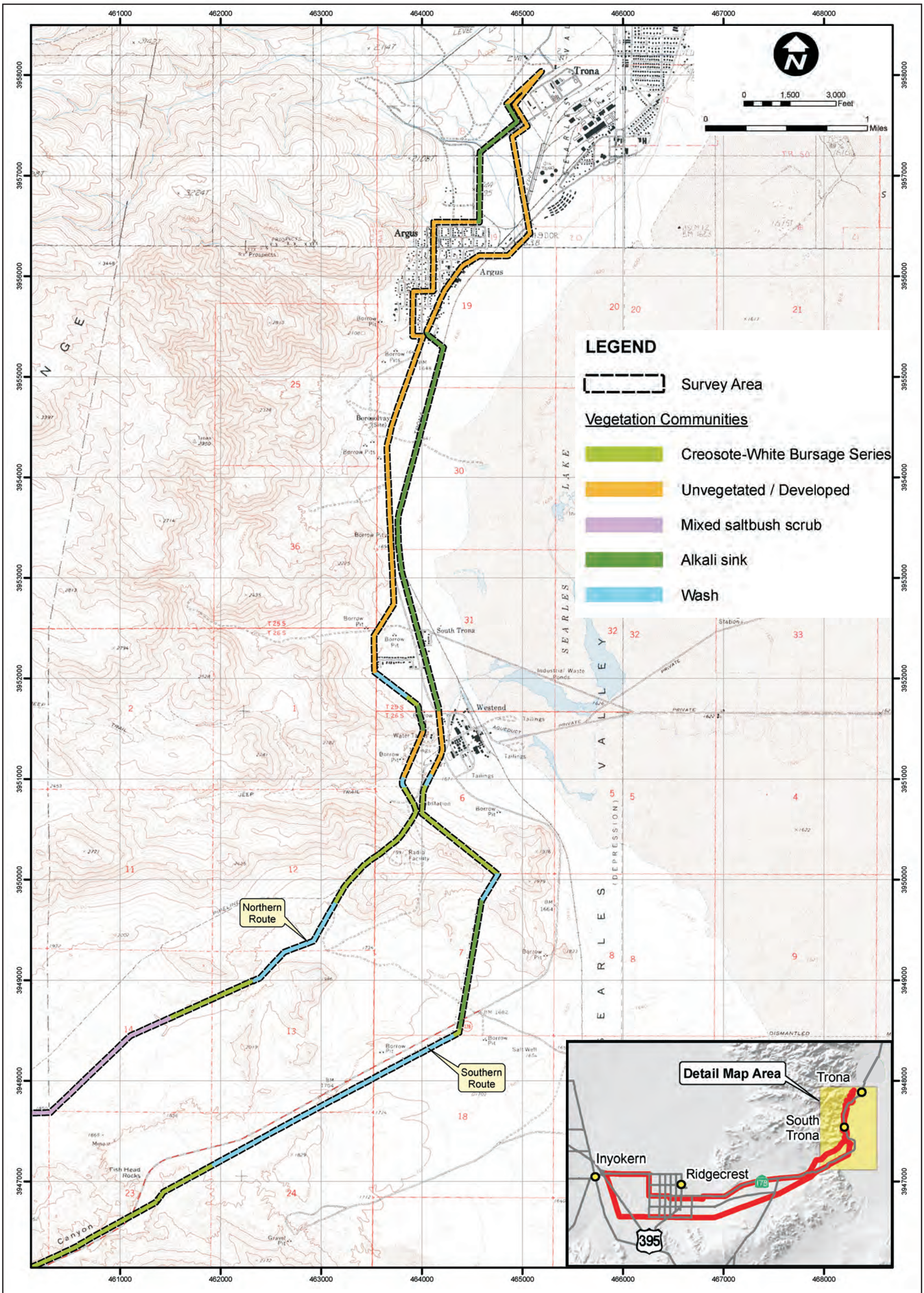
Source: Edison, 2010.

Figure B.3.4-3 (Revised)
Vegetation Communities
Central Project Area



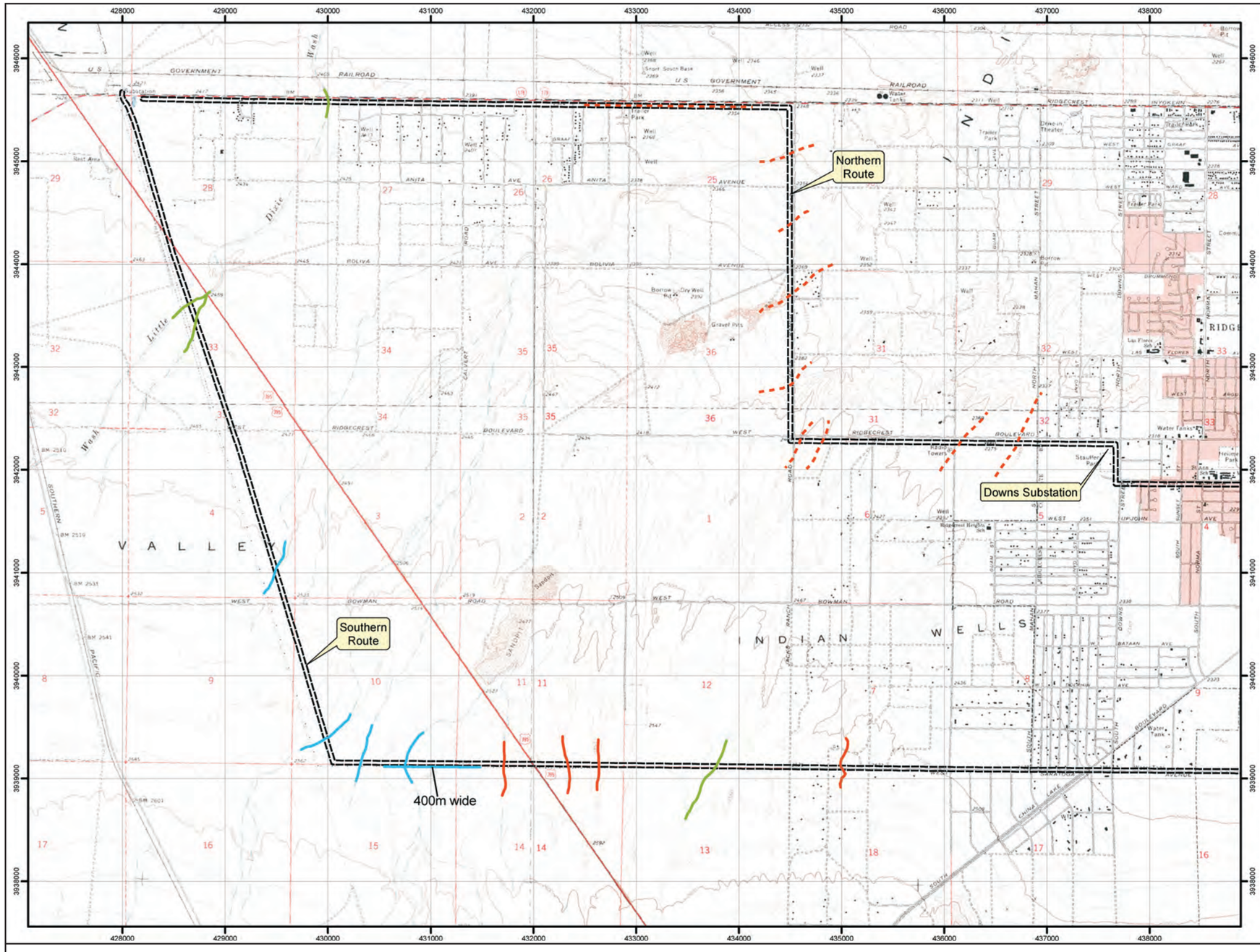
Source: Edison, 2010.

Figure B.3.4-4 (Revised)
Vegetation Communities
Eastern Project Area



Source: Edison, 2010.

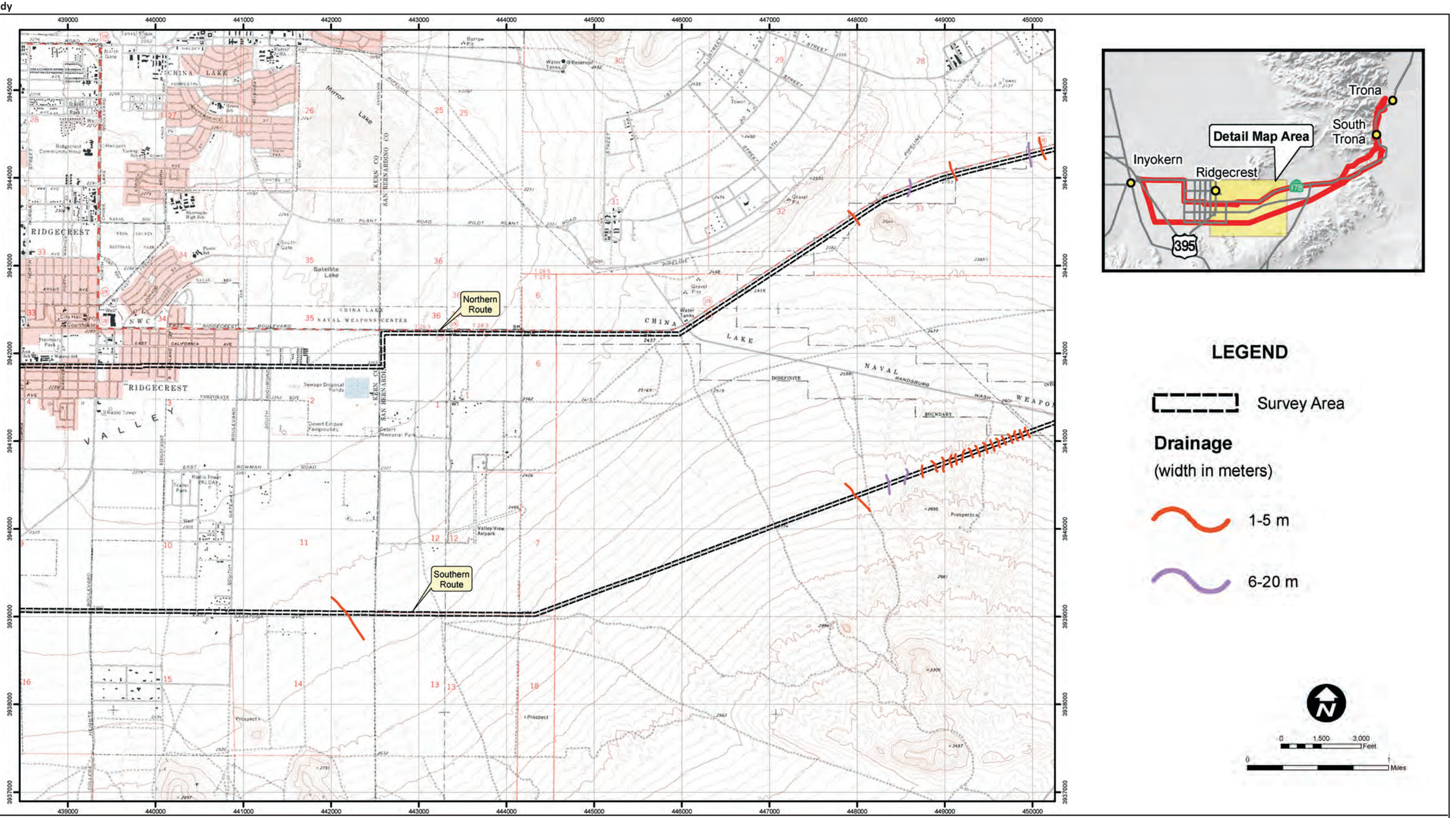
Figure B.3.4-5 (Revised)
Vegetation Communities
Northeast Project Area



Source: Edison, 2010.

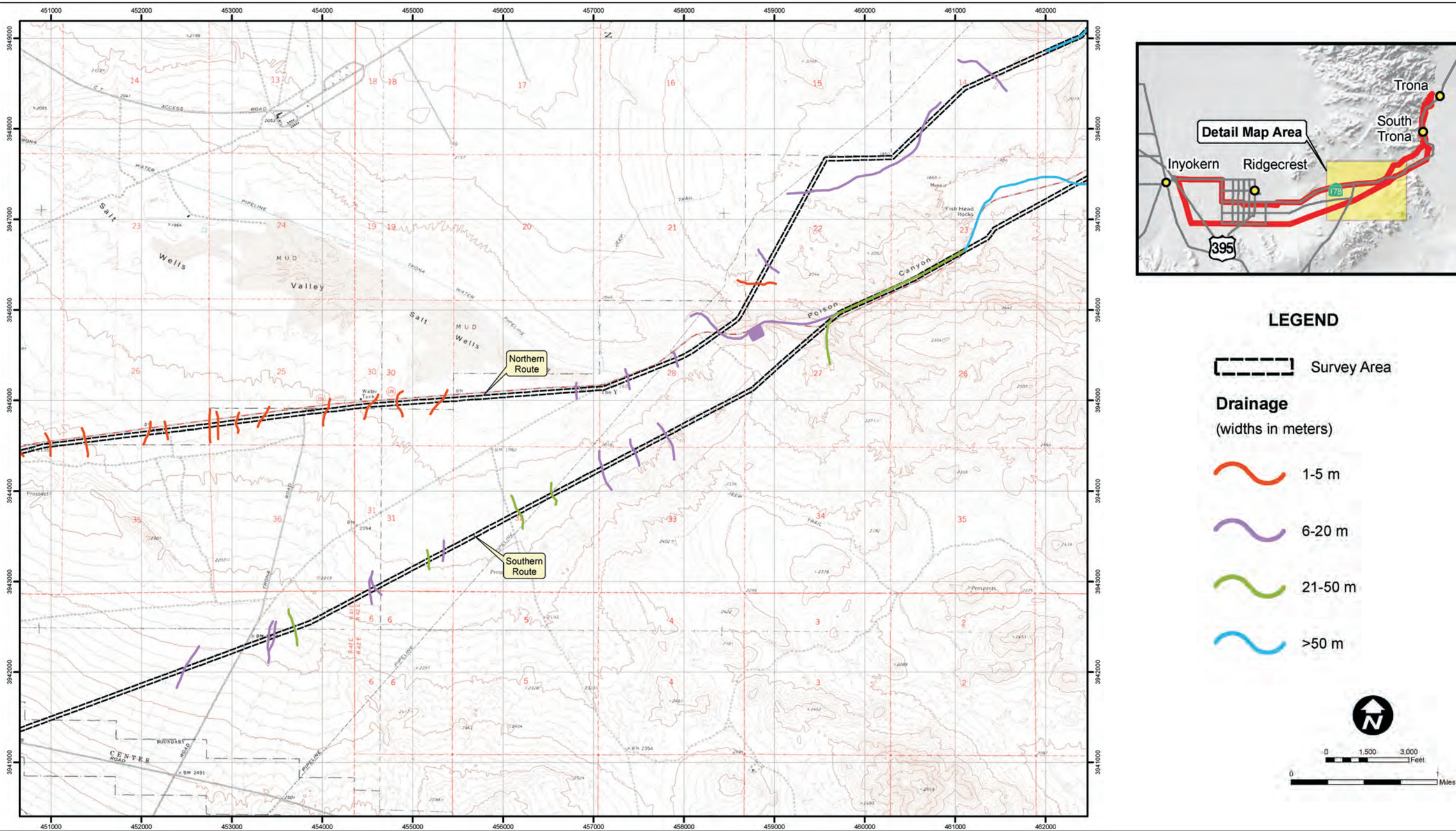
Figure B.3.4-6 (Revised)

Drainages in Survey Area
Western Project Area



Source: Edison, 2010.

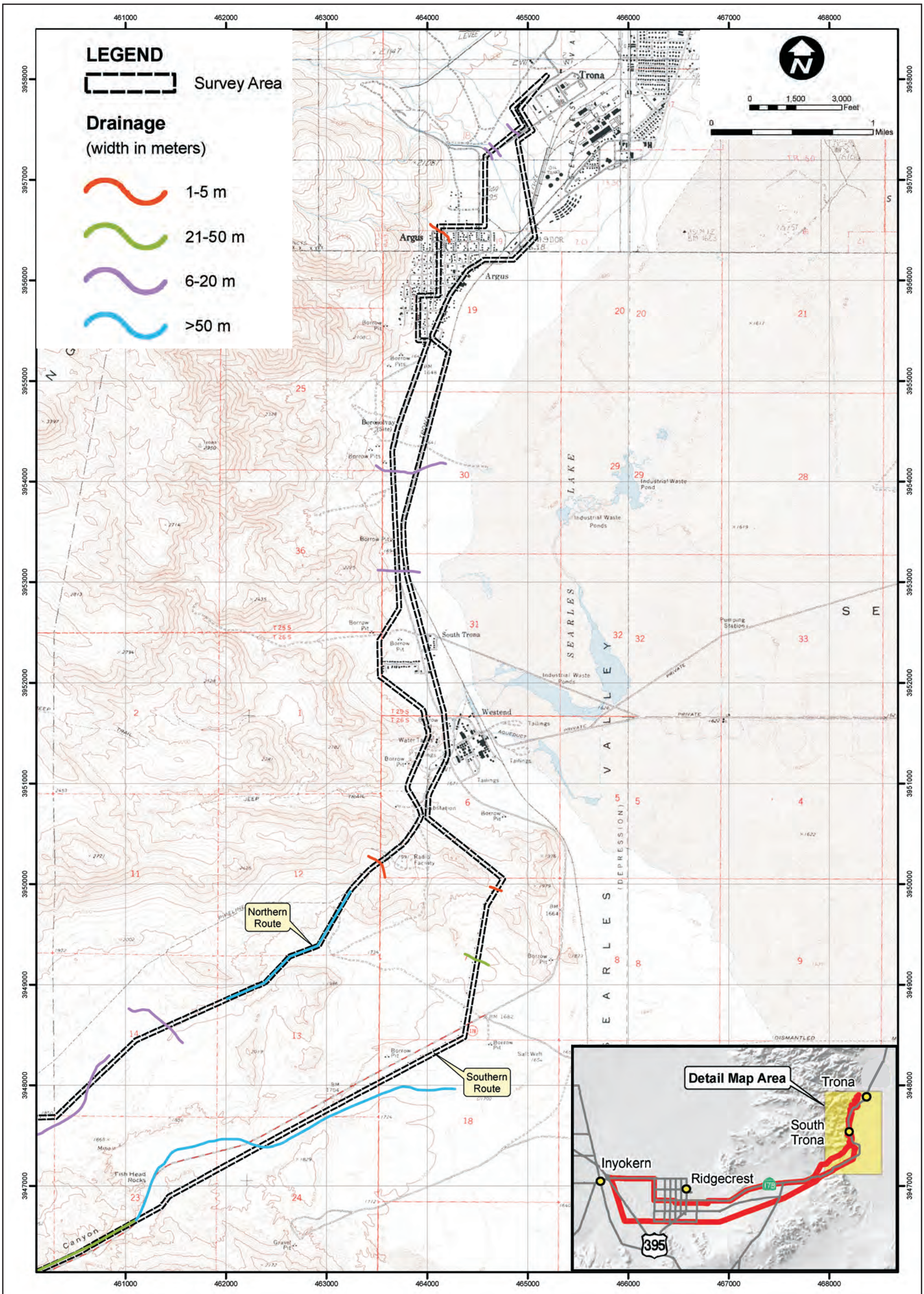
Figure B.3.4-7 (Revised)
Drainages in Survey Area
Central Project Area



Source: Edison, 2010.

Figure B.3.4-8 (Revised)

Drainages in Survey Area
Eastern Project Area



Source: Edison, 2010.

Figure B.3.4-9 (Revised)

Drainages in Survey Area
Northeastern Project Area