6.4 BIOLOGICAL RESOURCES

This section addresses potential impacts on biological resources (vegetation communities, wildlife and wildlife habitats) of the VV2 Project. The section discusses LORS related to biological resources and characterizes the biological resources of the VV2 Project plant site and linear facilities routes. It then discusses potential Project impacts on those resources during construction and operation, evaluates the significance of these impacts, and identifies measures to mitigate identified adverse impacts.

The biological resources study was performed by AMEC Earth and Environmental, Inc. Principal authors of the study were Michael Wilcox and Tom Egan. Additional detail, including the full reports of various field survey efforts (e.g., general biological surveys and protocol-level focused surveys for special status species) and the qualifications of key staff is provided in AFC Appendix H

6.4.1 LORS Compliance

The VV2 Project will comply with applicable federal, state, and local LORS throughout Project construction and operation. Potentially applicable LORS are summarized in Table 6.4-1 and discussed in the following text.

Table 6.4-1
LORS Applicable to Biological Resources

LORS	Applicability	Where Discussed in AFC
Federal:		
Endangered Species Act of 1973 and implementing regulations, 16 USC § 1531et seq.; 50 CFR § 17.1 et seq.	Designates and protects federally threatened and endangered plants and animals and their critical habitats. Requires federal agency consultation with U.S. Fish and Wildlife Service (USFWS) and issuance of Biological Opinion (BO) and incidental take authorization for listed species	Section 6.4.3
Migratory Bird Treaty Act 16 USC §§ 703-711	Prohibits take of protected migratory birds	Section 6.4.3
Section 404 of the Clean Water Act of 1977	Regulates the discharge of dredge and fill materials into jurisdictional waters of the United States, including wetlands.	Section 6.4.3

Table 6.4-1
LORS Applicable to Biological Resources

LORS	Applicability	Where Discussed in AFC
Section 401 of the Clean Water Act of 1977	Requires federal agencies to obtain certification that projects applying for a federal permit, (e.g., Section 404 permit), meet all state water quality standards.	Section 6.4.3
State:		
California Endangered Species Act (CESA) of 1984, Fish and Game Code, §2050 through §2098	Protects California's endangered and threatened species, including species designated as candidates for listing. Requires incidental take authorization under Sections 2080.1 or 2081 for listed species.	Section 6.4.3
Fish and Game Code Fully-Protected Species: §3511: Fully Protected birds §4700: Fully protected mammals §5050: Fully protected reptiles and mammals §5515: Fully protected fishes	Prohibits the taking of listed plants and animals that are classified as "Fully Protected" in California.	Section 6.4.3
14 CCR §§670.2 and 670.5	Listings of plants and animals of California declared to be threatened or endangered	Section 6.4.2
14 CCR §15000 et seq.	Describes information needed to evaluate biological resources impacts of a project	Section 6.4.3
Fish and Game Code S§1600 - 1607, Streambed Alteration Agreement (SAA)	Requires CDFG to review project impacts to "waters of the state" (bed banks, channel or associated riparian areas of a river, stream or lake), including impacts to wildlife and vegetation from sediments, diversions, and other disturbances	Section 6.4.3
Native Plant Protection Act of 1977, Fish and Game Code, §1900 et seq.	Provides specific protection measures for identified populations of state rare and endangered plants	Section 6.4.3
Fish and Game Code §§3503, 3511, 3513	Provides protection for bird species, primarily raptors (birds of prey)	Section 6.4.3

Table 6.4-1
LORS Applicable to Biological Resources

LORS	Applicability	Where Discussed in AFC
Local:		
City of Victorville General Plan-Resource Element, Mojave River Corridor Plan	Establishes floral and faunal resources that are considered sensitive and provides policies for protection of these resources. Provides protection and management of riparian habitat associated with Mojave River	Section 6.4.3
Southern California Logistics Airport Specific Plan	Establishes monitoring requirement during project construction and procedures for dealing with significant biological resources.	Section 6.4.4
City of Victorville Municipal Code, Chapter 13.33	Provides for the protection of Joshua trees	Section 6.4.3

6.4.1.1 Federal

Federal LORS applicable to biological resources are discussed below.

Endangered Species Act (ESA) (16 USC §§1531 *et seq*.). This 1973 law, administered by the USFWS, is designed to minimize impacts to imperiled plants and animals, as well as facilitate recovery of such species. Declining plant and animal species are listed as "endangered" or "threatened" based on a variety of factors. Applicants for projects requiring federal agency action that could adversely affect listed species are required to consult with and mitigate impacts in consultation with the USFWS. Adverse impacts are defined as "take" (defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct."), which is prohibited except as authorized through consultation under Section 7 or through issuance of an Incidental Take Statement under Section 10. The Ventura Field Office of the USFWS oversees permitting actions relative to the ESA in the Victorville area.

The Migratory Bird Treaty Act (MBTA) (16 USC §§703-711). This law prohibits actions resulting in the pursuit, capture, killing, and/or possession of any protected migratory bird, nest, egg or parts thereof. The USFWS maintain a list of designated migratory birds occurring in various regions of the United States. The agency also administers a permitting mechanism allowing for their incidental take where unavoidable

impacts to nesting birds arise. The Ventura Field Office of the USFWS oversees actions relative to the MBTA in the Victorville area.

The Bald and Golden Eagle Protection Act (16 USC §668) specifically protects bald and golden eagles from harm and from trade in parts of these species.

Section 404 of the Clean Water Act (33 USC §§1251 *et seq*.). This section of the Clean Water Act (1977) is administered by the U.S. Army Corps of Engineers (USACE) and regulates placement of dredged and fill material into "Waters of the U.S." The USACE has created a series of nationwide permits (NWP) that authorize certain activities within "Waters of the U.S," provided that the proposed activity does not exceed certain impact thresholds. Per this nationwide program, steps must also be taken to avoid impacts to wetlands where practicable, minimize potential impacts to wetlands, and provide compensation for any remaining, unavoidable impacts. For projects that exceed identified thresholds for nationwide permits, individual permits under Section 404 are required. The USACE Los Angeles District Office oversees regulatory permitting for projects in the Victorville area.

Section 401 of the Clean Water Act (33 USC §§1344 *et seq*.). Section 401 requires that federal agencies issuing licenses or permits for construction (e.g., a Section 404 permit) obtain a written certification that the activity will not cause or contribute to a violation of a state's water quality standards. After receiving the certification, the federal agency issuing the permit must include conditions in the permit to prevent the project from degrading water quality of a downstream state or tribe. In California, such certifications are provided by the applicable Regional Water Quality Control Board (RWQCB). The Lahontan RWQCB oversees permitting actions in the Victorville area.

Clean Air Act (CAA) (42 USC §85). The primary objective of the CAA is to establish federal standards for air pollutants from stationary and mobile sources and to work with states to regulate polluting emissions. The Project would occur within the Mojave Desert Air Basin (MDAB) in California, which is regulated by the Mojave Desert Air Quality Management District (MDAQMD). The MDAB does not currently meet federal air pollution standards for some criteria pollutants established by the federal EPA, such as ozone and PM-10 (particulate matter under 10 microns in size).

The primary source of ozone for this region is rapid urbanization within the MDAB and the South Coast Air Basin. Primary sources of PM-10 are naturally occurring dust picked up by wind, fugitive dust sources associated with construction, off-highway vehicle travel, unpaved road/parking lot use, industrial activities and military maneuvers. This identified non-attainment with established emission standards warrants special

considerations and controls for all project proposals which would further affect air quality of the MDAB.

6.4.1.2 State

State of California biological resources LORS are summarized below.

California Environmental Quality Act (CEQA) (Public Resources Code Section 15380). CEQA requires identification of significant environmental effects of proposed projects (including impacts on biological resources), and avoidance (where feasible) or mitigation of the significant effects. CEQA applies to "projects" proposed to be undertaken or requiring approval by State and/or local governmental agencies. “Projects” are activities that have the potential to have a physical impact on the environment. The CEC licensing process under the Warren-Alquist Act is a CEQA-equivalent process.

California Endangered Species Act or CESA (Fish and Game Code Section 2050 *et seq.*). This state law prohibits the “take” (defined as to hunt, pursue, catch, capture or kill) of state-listed species except as otherwise provided in state law. CESA, administered by CDFG, is similar to the federal ESA, although unlike the federal law, CESA applies incidental take prohibitions to species currently petitioned for state-listing status, i.e., candidate species. State lead agencies are required to consult with the CDFG to ensure that their authorized actions are not likely to jeopardize the continued existence of any state-listed species or result in the degradation of occupied habitat.

Under Section 2081, CDFG authorizes “take” of state-listed endangered, threatened, or candidate species through incidental take permits or memoranda of understanding. These acts, which are otherwise prohibited, may be authorized through permits or “memoranda of understanding” if (1) the take is incidental to otherwise lawful activities, (2) impacts of the take are minimized and fully mitigated, (3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in question, and (4) the applicant ensures suitable funding to implement the measures required by the CDFG.

Fish and Game Code Section 3511 describes bird species, primarily raptors, that are “fully protected”. Fully protected birds may not be taken or possessed, except under specific permit requirements.

Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Code or any associated regulation.

Fish and Game Code Section 3503.5 makes it unlawful to take, possess, or destroy birds of prey. It also prohibits the take, possession, or destruction of nests or eggs of any bird of prey.

Fish and Game Codes Sections 4700, 5050, and 5515 list mammal, amphibian, and reptile species that are classified as fully protected in California.

Native Plant Protection Act (NPPA), Fish and Game Code Section 1900 et seq. The NPPA includes measures to preserve, protect and enhance rare and endangered native plant species. Definitions for "rare and endangered" are different from those contained in CESA although CESA-listed rare and endangered species are included in the list of species protected under the NPPA.

Title 14, California Code of Regulations Sections 670.2 and 670.5 lists plant and animal species designated as threatened and endangered in California. California species of special concern (CSC) is a category applied by the CDFG to those species that are indicators of regional habitat changes or are considered potential future protected species. CSCs do not have any special legal status, but are intended by CDFG for use as a management tool to take these species into special consideration when decisions are made concerning the future of any land parcel.

California Fish and Game Code, Sections 1600-1607. Pursuant to these sections, CDFG regulates all changes to the natural flow, bed or bank, of any river, stream, or lake that support fish or wildlife resources. A stream is defined broadly as a body of water that flows at least periodically, or intermittently, through a channel that has banks, and that supports fish or other aquatic biota. Such areas are formally referred to as "waters of the state". Impacts to vegetation and wildlife from sediment, diversions, and other disturbances are included in the review.

6.4.1.3 Local

City of Victorville General Plan. The City General Plan Resource Element identifies floral and faunal resources that are considered sensitive and provides policies for protection of these resources. Through implementation of the Mojave River Corridor Plan, the General Plan provides protection and management of riparian habitat associated with the Mojave River.

Southern California Logistics Airport Specific Plan. The SCLA Specific Plan establishes a biological monitoring requirement during project construction and procedures for dealing with protection of significant biological resources.

City of Victorville Municipal Code, Title 13, Chapter 13.33. This code section protects Joshua trees within Victorville. Prior to submitting an application for a grading permit, this code section requires that an inventory of Joshua trees on the site be conducted, a plan for disposition be developed (relocate on-site, relocate off-site, put trees up for adoption), and that the City conduct an inspection.

West Mojave Plan. The West Mojave Plan forms the basis for the largest habitat conservation plan (HCP) ever developed in the United States. This amendment to the BLM's 1980 California Desert Conservation Area (CDCA) Plan encompasses 9.3 million acres within San Bernardino, Kern, Los Angeles, and Inyo counties. The West Mojave Plan forms the basis for a multi-agency Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act of 1973 (FESA), which has been approved, as well as a natural Communities Conservation Plan (NCCP), under the NCCP Act of 2001, which has not yet been approved by the state.

The West Mojave Plan provides a comprehensive regional strategy to conserve and protect more than 100 listed or sensitive wildlife species and their habitats on public lands in the region, including the threatened Desert Tortoise and Mohave Ground Squirrel. The Plan provides a streamlined program for various public agencies and private parties to comply with requirements of the State and Federal Endangered Species Acts. Conceptually, this is to be accomplished through the use of a private land development fee and public land conservation programs for specifically-covered special status species, (Desert Tortoise, Mojave Ground Squirrel, Le Conte's Thrasher, Burrowing Owl, etc.). Although the West Mojave Plan does not apply at this time to the VV2 Project, it nevertheless provides important guidance regarding impact assessment and mitigation and compensation requirements.

6.4.1.4 Involved Agencies and Local Contacts

The federal, state, and local agencies involved in biological resource issues related to the VV2 Project are provided in Table 6.4-2.

Table 6.4-2
Involved Agencies and Agency Contacts

Agency/Address	Contact Name and Title	Phone No.	Permit/ Reason for Involvement
U.S. Fish and Wildlife Service 2493 Portola Road, Suite B Ventura, CA 93003	Ray Bransfield, Senior Biologist	(805) 644-1766	Endangered Species Act, Section 7 Consultation
U.S. Army Corps of Engineers Los Angeles District 911 Wilshire Boulevard P.O. Box 2711 Los Angeles, CA 90053	Gerardo Salas, Environmental Engineer/Project Manager	(213) 452-3417	Clean Water Act, 404 Permit
California Department of Fish and Game 407 West Line Street Bishop, CA 95314	Tonya Moore, Environmental Scientist	(760) 955-8139	Endangered Species Take (Section 2081) Permit Streambed Alteration Agreement
California Regional Water Quality Control Board-Lahontan Region 14440 Civic Drive, Suite 200 Victorville, CA 92392	Mary Dellavale, Environmental Scientist	(760) 241-3523	Water Quality Certification (CWA Section 401)
City of Victorville 14343 Civic Drive Victorville, California 92393	Chris Borchert, Deputy Planning Director	(760) 955-5102	Compliance with City General Plan and SCLA Specific Plan
City of Victorville Community Service Department Parks Division 15745 Lorene Dr. Victorville, CA 92392	Donny Sanchez	(760) 955-5275	Compliance with City Joshua Tree ordinance

6.4.1.5 Required Permits and Permit Schedule

As shown in Table 6.4-3, the VV2 Project may require several permits that are specific to biological resource issues.

Table 6.4-3
Required Biological Resource Permits and Permitting Schedule

Permit/Approval	Schedule
Endangered Species Act, Section 7 Consultation	Consultation will be initiated by USEPA following submittal of a draft biological assessment to USEPA by the VV2 Project
Endangered Species Take (2081) Permit;	CDFG will be invited to participate in the Section 7 consultation with USFWS and USACE regarding species protected under both the ESA and CESA. Discussions already have been initiated with CDFG regarding a Section 2081 take permit for species listed only under CESA, and it is anticipated that CESA permitting will be completed at the same time as USFWS permitting.

6.4.2 Affected Environment

The following section describes the biological resources in the VV2 Project area, based on literature research and field surveys conducted at the plant site, construction laydown areas, reclaimed water supply pipeline, sanitary wastewater disposal pipeline and the three segments of the Project transmission line. It begins with a regional overview, the vegetation types and habitat present in the Project area, a description of wildlife typical to the area, and a discussion of specific special status species known to occur in the West Mojave Valley as well as within the specific Project areas that were studied.

6.4.2.1 Regional Setting

The entire Project is located in the City of Victorville, with the exception of the southernmost portions of the Project's 21–mile transmission line route, which is in the City of Hesperia. Victorville and Hesperia are part of what is commonly referred to as the Victor Valley in the western portion of the Mojave Desert. Spanning more than 32 million acres of land across four states, the Mojave Desert encompasses approximately 20 million acres of California. The west Mojave Desert lies in the rain shadow of the Transverse Ranges (i.e., San Bernardino and San Gabriel Mountains) where a diverse array of geologic features is exhibited. These include rocky hills, cliffs, alluvial fans, playas, bajadas, sand dunes, ephemeral washes, and its signature hydrologic feature: the Mojave River. The Mojave River has been called the "Upside-down River," as water flows underground for a considerable length of its distance toward an inland dry lake, rather than to the Pacific Ocean.

The climate in the Victorville area is typical of an arid desert. Clear, sunny skies prevail 95 percent of the time. Temperatures in the summer often exceed 100˚F with low humidity. Fall and winter temperatures can fall below freezing with occasional snowfall during the winter. Mean rainfall is 5.60 inches annually, with the bulk occurring during the winter months of December, January and February.

Fluctuations in temperature, moisture variation and seasonality through time have altered vegetation zones, which developed in response to climatic conditions. In moister times, vegetation zones in the valleys and basins developed down slope. When the climate became drier, the vegetation zones developed up the slopes of the mountains, leaving the lower lands with sparser, arid-adapted vegetation essential source of food and water for the earliest inhabitants of the desert. Alkali soils devoid of vegetation are characteristic of the lowest elevations in the Mojave Desert. Vegetation is sparse consisting mostly of desert shrubs and an intermittent understory of annual and perennial grasses and herbs (U.S. Department of Agriculture 1986). Vegetation communities typical of upland areas within the Mojave Desert include, but are not limited to Mojave creosote bush scrub, Joshua tree woodland, desert saltbush scrub, and Mojavean juniper woodland and scrub.

A variety of sensitive biological resources are known to occur in the general area of the Project. These include species that occur in both the Mojave creosote bush scrub and desert saltbush scrub vegetation communities present on the Project site and vicinity, as well as those associated with cottonwood-willow riparian habitats along the Mojave River. Suitable desert tortoise habitat is found on the Project site as are individual members of the species. The site also provides potentially suitable habitat for the Mohave ground squirrel, burrowing owl, and various other special status (and common) wildlife species.

6.4.2.2 Project Site and Vicinity

The vicinity of the Project's plant site, construction laydown areas, and Segment 1 of the linear features consist primarily of natural open space lands largely vegetated with Mojave creosote bush scrub with a limited number of disturbed and developed areas present. The most prominent feature in the vicinity of the Project site is the Mojave River, situated approximately 0.5 mile to the east. The Mojave River supports above-ground water flow in this vicinity and flows north and east to its northern terminus at Soda Dry Lake, near Baker, California. Vegetation communities associated with this reach of the Mojave River include, but are not limited to southern willow scrub, cottonwood-willow woodland, and Mojave riparian forest.

A variety of special status biological resources are known to occur in the Project vicinity. These include species associated with the Mojave creosote bush scrub, desert saltbush scrub, and cottonwood-willow riparian vegetation communities. Additionally, critical

habitat for the southern willow flycatcher is located in areas adjacent to Segments 2 and 3 of the electrical transmission line. Figure 6.4-1 shows the species that are included on the California Natural Diversity Database (CNDDB) in the Project vicinity.

The Project areas are located outside of USFWS-designated critical habitat for the desert tortoise, BLM desert tortoise habitat categorizations, and CDFG desert tortoise Crucial Habitat Areas. However, suitable habitat for the desert tortoise, Mohave ground squirrel, burrowing owl, and various other special status wildlife species is present throughout the Project site. Very limited areas of marginally suitable habitat for several of the special status plant species known to occur in the vicinity are also present intermittently on the site. Additionally, the site provides suitable habitat for the common wildlife species inhabiting this region of the Mojave Desert, including but not limited to: side-blotched lizard (*Uta stansburiana*), desert night lizard (*Xantusia vigilis*), Great Basin whiptail (*Aspidoscelis [Cnemidophorus] tigris tigris*), Great Basin gopher snake (*Pituophis melanoleucus deserticola*), coachwhip (*Masticophis flagellum*), Mojave rattlesnake (*Crotalus scutulatus*), verdin (*Auriparus flaviceps*), black-throated sparrow (*Amphispiza bilineata*), horned lark (*Eremophila alpestris*), cactus wren (*Campylorhynchus brunneicapillus*), common raven (*Corvus corax*), black-tailed jackrabbit (*Lepus californicus*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), coyote (*Canis latrans*), and kit fox (*Vulpes macrotis*).

The biological resources found within and in the vicinity of each of the Project components are discussed below.

Power Plant Site. The plant site is relatively flat, with sandy soils and exhibiting little variation in topography. Two vegetation communities, Mojave creosote bush scrub and non-native grassland (disturbed/ruderal areas), are present on the site (see Figure 6.4-2 which shows the vegetation communities of the entire Project area, including the power plant site). Dominant plant species within the Mojave creosote bush scrub portions of the site include white bursage (*Ambrosia dumosa*), creosote bush (*Larrea tridentata*), and cheesebush (*Hymenoclea salsola*). Joshua trees (*Yucca brevifolia*) and cacti (*Opuntia ssp.)* are sparsely scattered across this area of the site.

The areas of non-native grassland occur primarily in association with the few scattered home sites present on the site and along road sides in some areas. These areas were formerly Mojave creosote bush scrub; however, they have been cleared of most of this natural community at some point in the past and now generally support largely barren, open areas that provide opportunities for weedy, disturbance-loving plant growth. Dominant plant species observed within these areas include short-pod mustard (*Hirschfeldia incana*), rancher's fiddleneck (*Amsinckia tesselata*), red brome (*Bromus madritensis ssp. rubens*), schismus (*Schismus barbatus*), and storksbill (*Erodium cicutarium*).

Common wildlife species inhabiting the plant site are consistent with, but not limited to, the species referenced above in Section 6.4.2.2.

Construction Laydown Areas. Two construction laydown areas are planned, one to the west of the plant site and the other to the south. The terrain of the western laydown area is flat, exhibiting very little variation in topography and with no existing structures or roads. One vegetation community, Mojave creosote bush scrub, is present within the laydown areas. Dominant plant species within this community include white bursage, creosote bush, and cheesebush with Joshua trees and cacti also sparsely scattered across the area. Special status and common wildlife species are consistent with, but not limited to species mentioned above in Section 6.4.2.2.

The terrain of the southern laydown area is flat to gently sloping, small rolling hills; it contains no existing structures and one unsurfaced dirt road. As with the western laydown area, one vegetation community, Mojave creosote bush scrub, is present; dominant plant species include white bursage, creosote bush, and cheesebush with sparsely scattered Joshua trees also present. One area in the southeast portion of the laydown area is densely vegetated and dominated by pencil cholla (*Opunita ramosissima*). Special status and common wildlife are consistent with, but not limited to species described above in Section 6.4.2.2.

Linear Features. Project linear features include a sanitary wastewater pipeline, a reclaimed water supply pipeline, and an electrical transmission line. Please note that for purposes of this discussion, Segment 1 of the transmission line's three segments encompasses the nearby water supply and sanitary wastewater disposal pipelines.

Transmission Line Segment 1. Segment 1 extends southerly approximately 4.3 miles from the plant site to the point where it joins the existing transmission path that connects the HDPP to the SCE regional grid. The terrain that Segment 1 traverses varies from relatively flat to moderately-sloping hills and valleys. Segment 1 also bisects 40 ephemeral washes at various locations. Plant communities include Mojave creosote bush scrub, non-native grassland, and desert saltbush scrub. Dominant plant species within the areas of Mojave creosote bush scrub and non-native grassland are consistent with the species listed above for the power plant site, as are the wildlife species associated with these vegetation communities. The dominant plant species observed within the desert saltbush scrub areas included allscale (*Atriplex polycarpa*). Joshua trees are sparsely distributed along portion of Segment 1. Disturbed and developed areas are also present along portions of the segment, as shown on Figure 6.4-2.

Segment 2. Segment 2 of the VV2 Project transmission line is within an existing ROW that contains the HDPP transmission line and extends approximately 5.7 miles to its terminus at SCE's existing Victor substation. Two vegetation communities, Mojave creosote bush scrub and desert saltbush scrub, are present along Segment 2. Dominant plant species within the Mojave creosote bush scrub include white bursage, creosote bush, and cheesebush. Joshua trees and cacti (*Opuntia ssp.*) are sparsely scattered throughout. Dominant plant species of the desert saltbush scrub include allscale and four-winged saltbush (*Atriplex canescens*). Special status and common wildlife species associated with these vegetation communities are consistent with the species listed above in Section 6.4.2.2.

Segment 3. Segment 3 of the VV2 Project transmission line extends approximately 11 miles in a southerly direction until it reaches the existing SCE Lugo substation. Segment 3 is entirely within a large existing SCE transmission ROW that contains a number of transmission lines. Plant communities occurring along Segment 3 include Mojave creosote bush scrub, non-native grassland, Mojavean juniper woodland and scrub, and rabbitbrush scrub. Dominant plant species within the areas of Mojave creosote bush scrub and non-native grassland are consistent with the species listed for the power plant site above, as are the wildlife species associated with these vegetation communities.

In the area of Segment 3 between I-15 and Main Street, the Mojave creosote bush scrub transitions to Mojavean juniper woodland and scrub. California juniper (*Juniperus californica*) is the dominant species of this community, along with California buckwheat (*Eriogonum fasiculatum*), Cooper's goldenbush (*Ericameria cooperi*), and rubber rabbitbrush (*Chrysothamnus nauseosus*). In previously disturbed areas, the rubber rabbitbrush (a pioneering species) becomes the overwhelming dominant plant species. These areas are considered rabbitbrush scrub. Joshua trees are also sparsely distributed along portions of Segment 3. Special status and common wildlife species associated with these vegetation communities are consistent with the species listed above in Section 6.4.2.2.

6.4.2.3 Biological Surveys

Field surveys were conducted to evaluate biological resources located within the VV2 Project area (plant site and linear features), as well as within a one mile-radius of the power plant site and the laydown areas and 1,000-foot radius of the linear features, where possible. The surveys included: (1) general field surveys for plant communities and wildlife habitats; (2) focused surveys and habitat assessment for rare plants, desert tortoise, Mohave ground squirrel, and burrowing owl; and (3) a delineation of jurisdictional waters. The field surveys were aided by the results of a literature search that included the CNDDB,

CNPS Inventory, other biological reports, and consultation with biologists with experience in the vicinity of the Project site. This section describes the methods and results of the biological field surveys that were performed.

General Biological and Habitat Surveys.

General biological field surveys were conducted in February, March, April and May 2006, prior to and concurrent with focused surveys for the desert tortoise. In general, when conducted concurrent with desert tortoise surveys, the general surveys involved using transects spaced no more than 30 feet apart covering areas of the Project site to be impacted by ground disturbance activities. When conducted nonconcurring with the desert tortoise surveys, the general surveys involved walking transects of various widths. A general habitat assessment was also conducted at the one mile radius mark around the power plant site and laydown areas and at 1,000 feet around the Project's linear features as well as within the Zone of Influence (ZOI). Buffer zone transects were performed at 100-foot intervals out to 500 feet from the edge of the Project areas. ZOI transects were performed at 100, 300, 600, 1,200, and 2,400-feet intervals, where possible. All flora and fauna detected (e.g., through direct observation, vocalizations, presence of scat, tracks, and/or bones) on the Project site were recorded in field notes. Special status biological resources observed were plotted by using handheld Global Positioning Systems (GPS) equipment and placed into a geographic information system (GIS). Unknown species of plants were collected and identified by Andrew C. Sanders, the Herbarium Collection Curator for the University of California at Riverside (UCR). Plant communities were described in accordance with Robert F. Holland's (1986) descriptions of the terrestrial natural communities of California. The Sawyer and Keeler-Wolf (1995) series are also referenced as a plant community classification guide.

The acreage referred to as the "power plant site" in the biological resources discussion includes adjacent areas that would be disturbed during construction (e.g., by grading activities), but that are outside the approximately 275 acres that will be actually be within the ultimate fenced power plant site. This additional acreage is primarily adjacent to the eastern areas of the plant site and totals approximately 63 acres, meaning that the overall biological study area for the plant site is approximately 338 acres.

Plant Communities

Five plant communities occur throughout the various areas of the Project site. These include Mojave creosote bush scrub, desert saltbush scrub, non-native grassland, Mojavean juniper woodland scrub, and rabbitbrush Scrub. Disturbed/Developed lands are also present and mapped within the various site areas. Five additional plant communities occur

nearby to the east of the power plant site and portions of Segment 1, along the Mojave River. These include Mojave riparian forest, open cottonwood-willow woodland, Southern willow scrub, Mojave wash scrub, and open sandy riverbed. Figure 6.4-2 illustrates the vegetation communities on the Project site, within a one-mile radius of the plant site, and within a 1000-foot radius of the Project's linear features.

Mojave creosote bush scrub is the dominant vegetation community within the Project areas (see Figure 6.4-2). Mojave creosote bush scrub encompasses approximately 285 acres of the power plant site, 50 acres of the two laydown areas, and 20 acres within the disturbance footprint of the linear features in Segment 1, two acres in segment 2, and 55 acres in Segment 3. This plant community is comprised of widely-spaced shrubs 0.5 to 3 meter (1.6 to10 feet) in height. Plant growth generally occurs during late winter and early spring months, when annual precipitation is sufficient. A large variety of annual herbaceous plants blooms following such rainfall (Holland 1986). Dominant plant species present include white bursage, creosote bush, and cheesebush. Less common species include Nevada joint fir (*Ephedra nevadensis*), winter fat (*Krascheninnikovia lanata*), freckled milkvetch (*Astragalus lentiginosus* var. *fremontii*), Joshua tree, sandpaper plant (*Petalonyx thurberi*), and pencil cholla.

Desert saltbush scrub community occurs on approximately 0.3 acres within the southern-most areas of Segment 1. As shown on Figure 6.4-2, this community is also present outside the Project area but within the one-mile radius around the plant site and within the 1,000-foot buffer area around the linear facility corridors. This plant community is characterized by low-growing, grayish, microphyllous shrubs and the presence of some succulent species. Although a variety of saltbush (*Atriplex* ssp.) species can be present, this vegetation community is often dominated by a single saltbush species (Holland 1986). The dominant plant species present within these areas included Allscale (*Atriplex polycarpa*). Other species present included four-winged saltbush (*Atriplex canescens*), shadescale (*Atriplex confertifolia*), and spine scale (*Atriplex spinifera*).

Non-native grassland encompassed approximately three acres within the power plant site (see Figure 6.4-2). This area had been cleared of the pre-existing natural vegetation community, likely Mojave creosote bush, and colonized by exotic annual species. This plant community is characterized by a dense to sparse cover of annual grasses and forbs. Although primarily dominated by exotic species, native annual species are often preset within this community, especially during years of ample rainfall. Vegetation cover of these areas varies from being entirely void of vegetation to areas exhibiting a sparse overstory vegetation cover (e.g., remnant creosote bush and white bursage) and a dense understory of exotic annual species including the checker fiddleneck (*Amsinckia tessellate*) and various mustard species (*Brassia sp.).*

Mojavean juniper woodland and scrub occur on approximately 23 acres of Segment 3, particularly in its southern portions. This community is characterized by low, open woodland community dominated by California juniper (*Juniperus californicus*). Other species present include Joshua tree, rubber rabbitbrush, and Nevada joint-fir.

Rabbitbrush scrub occurs in areas of Segment 3 that have received historic site disturbance (e.g., adjacent to road crossings, the California Aqueduct). However, this community is not expected to be impacted by Project activities. This disturbance-maintained community is dominated by rubber rabbitbrush.

Mojave riparian forest plant community occurs outside of the Project area to the east of the site within the Mojave River and within approximately 50 feet of the proposed route of the Project's reclaimed water supply pipeline. This plant community is characterized by a relatively open forest community that occurs along the larger rivers and streams of in the Mojave Desert and is dominated by Fremont cottonwood (*Populus fremontii*). Other vegetation associated with this community includes Goodding's black willow (*Salix gooddingii*), California sycamore (*Plantanus racemosa*), and mulefat (*Baccharis salicifolia*). The trees within this community are generally less than 82 feet in height and the canopy cover is continuous in patches. Shrubs and variable surface vegetation provide a ground cover ranging from continuous to infrequent.

Open cottonwood-willow woodland community does not occur on the Project area but is present within the Mojave River, within the one-mile radius of the plant site and the 1,000-foot radius of the linear features. One small area of this community also occurs at one location outside of the Mojave River in the southern portions of Segment 1 (see Figure 6.4-2). This plant community is characterized by mature stands of Fremont cottonwood and willow species located in the drier area, outside but often adjacent to the Mojave riparian forest community. This community is more open than the Mojave riparian forest and exhibits little under story. Larger willow species may be present in low densities.

Southern willow scrub does not occur within the Project area, but occurs to the east of the site within the Mojave River and within approximately 60 feet of the Project's reclaimed water pipeline along the eastern fence line of the VVWRA facility. This plant community is typically present along watercourses and is characterized by shrubby willow species, primarily narrowleaf willow (*Salix exigua*), that form dense, low-growing thickets. Along the outer edge of this community, away from areas of surface water, Fremont cottonwoods also occur (Tierra Madre Consultans 1992).

Mojave wash scrub is generally absent from the Project site but occurs intermittently along portions of the Mojave River in the vicinity of the site and in several offsite washes that

bisect portions of Segment 1 (Figure 6.4-2). Mojave wash scrub is characterized by a low-growing, shrubby, sparsely vegetated plant community exhibiting scattered to locally dense overstory of microphyllous trees (Holland 1986). This vegetation community typically occurs in the sandy bottoms of wide canyons, incised arroyos of upper bajadas, and within braided, shallow washes of the lower bajadas, usually below 5,000 feet.

Areas of open, sparsely-vegetated, sandy riverbed are present within the floodplain of the Mojave River within the one-mile radius of the Project site. These areas are distinct from the Mojave riparian forest plant community, as they either lack trees and shrubs entirely or have only scattered individual trees or shrubs, being sparsely vegetated with annuals and/or early stage successional saplings from riparian trees and vegetation. Representative plant species occurring within this community include scalebroom (*Lepidospartum squamatum*), rubber rabbitbrush, and Yerba santa (*Eriodyction trichocalyx*).

Disturbed/developed areas occur on approximately 50 acres of the power plant site and four acres within Segment 1. This community is characterized as all areas that are either devoid of vegetation as a result of site grading, areas developed or occupied with structures, and areas landscaped with non-native ornamental plants and shade trees. These areas include unsurfaced and paved roads, graded or cleared areas, driveways, parking areas, houses, cement foundations, and existing structures.

Plant Species

A total of 116 plant species were recorded on the Project site during the general field surveys. This number does not reflect the total number of plant species likely to occur on the site. Some annual species were undetectable due to the season that the surveys were undertaken and the amount and timing of the rainfall received in 2006. Additionally, ten special status plant species were identified as occurring in the vicinity (within approximately ten miles) of the Project site. Six of the special status plant species were determined to have a potential to occur within the Project site and focused plant surveys were conducted for these species. These results of these surveys are discussed below.

AFC Appendix H includes the scientific and common names for all plant species detected on the site and reported in the vicinity.

Wildlife Species

A total of 131 vertebrate species, including 14 reptile species, 104 bird species, and 13 mammal species, were recorded on the Project site during the general field surveys. Additionally, 39 special status wildlife species including two invertebrates, two amphibians, four reptiles, 28 birds, and three mammals were identified as occurring in the

vicinity (within approximately ten miles) of the Project site. Appendix H includes the scientific and common names for all wildlife species detected on the site and reported in the vicinity. It should be noted that relatively short-term inventories of this nature are limited in their scope by the seasonality, timing and duration of surveys, as well as by the nocturnal and fossorial habits of many desert-dwelling animals. Therefore, the list of vertebrate species in Appendix H does not necessarily reflect the total number of animals that potentially occupy the site.

Representative reptile species identified during the general field survey included side-blotched lizard, Great Basin whiptail, Great Basin gopher snake, and Mojave Rattlesnake. One sensitive species, the desert tortoise (*Gopherus agassizii*) was also observed throughout various areas of the Project site.

Representative migratory and resident bird species observed during the general field survey included: Costa's hummingbird (*Calypte costae*), common raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicenisis*), mourning dove (*Zenaida macroura*), Say's phoebe (*Sayornis saya*), western meadowlark (*Sturnella neglecta*), lesser nighthawk (*Chordeiles acutipennis*), barn swallow (*Hirundo rustica*), northern mockingbird (*Mimus polyglottos*), and house finch (*Carpodacus mexicanus*). Sensitive bird species detected onsite or observed adjacent to the site (e.g., flying by) included, but were not limited to, bald eagle (*Haliaeetus leucocephalus*), Swainson's hawk (*Buteo swainsoni*), burrowing owl (*Athene cunicularia*), Le Conte's thrasher, and loggerhead shrike (*Lanius ludovicianus*).

Representative mammal species observed during the general surveys included white-tailed antelope squirrel, desert cottontail (*Sylvilagus audubonii*), Panamint kangaroo rat (*Dipodomys panamintinus*), southern grasshopper mouse (*Onychomys torridus ramona*), kit fox (*Vulpes macrotis*) and coyote (*Canis latrans*). Of these, only the southern grasshopper mouse is considered to be a sensitive species. Other common mammals such as the Virginia opossum (*Didelphis virginiana*), bobcat (*Felis rufus*), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*) are expected to occur on and adjacent to the site, but were not observed during the surveys due to survey timing, seasonality, and/or the nocturnal activity of many mammal species.

As mentioned previously, 39 special status wildlife species were identified as occurring within approximately ten miles of the Project site. Based on the general biological surveys, several of these species were determined to have the potential to occur onsite. These species include the San Diego coast horned lizard, desert tortoise, southwestern pond turtle, burrowing owl, Mojave ground squirrel, Mojave River vole, and San Emigdio blue. Focused surveys for the desert tortoise, burrowing owl, and Mojave ground squirrel were conducted. These surveys are discussed in a separate section below. Focused surveys for

the remaining species were not conducted, since there is a low potential for these species to occur onsite.

Additionally, nineteen special status bird species were observed during the field surveys. These included a variety of resident and migratory bird species. A list of these species is provided in Appendix H. Two of the species observed, the bald eagle (*Haliaeetus leucocephalus*) and Swainson's hawk (*Buteo swainsoni*) are listed as endangered and/or threatened by the USFWS and CDFG, while the remaining 18 species are either designated as CSC by the CDFG, "Watch List" species by the Audubon Society, on the United States Bird Conservation (USBC) "Watch List", or on the American Bird Conservancy (ABC) "Green List," or any combination of these. Many of these species are only considered to be sensitive by the resource agencies while they are actively nesting. Additionally, all migratory non-game bird species are protected by the Migratory Bird Treaty Act and also by California Fish and Game Code (Section 3513). Nesting habitat for several bird species including Swainson's hawk, Costa's hummingbird (*Calypte costae*), loggerhead shrike (*Lanius ludovicianus*), yellow-billed cuckoo, and Le Conte's thrasher (Toxostoma lecontei) occur within or adjacent to the Project site. Critical habitat for the southern willow flycatcher occurs in the vicinity of the Project site.

Fish and Wildlife Species of Commercial or Recreational Value

Species of commercial or recreational value include those species that provide local or regional financial resources to individuals or groups and could include fisheries, small game hunting, etc.

Areas of undeveloped open space lands in the Mojave Desert have the potential to support fish and wildlife species of commercial and/or recreational value to the general public. Examples may include lands used for the legal hunting of, or fishing for, respective game or sport fish species and bird watching or wildlife viewing.

The City of Victorville does not allow hunting within its corporate boundaries. Therefore permanent and temporary loss of habitat within the Project site is not expected to impact legal hunting of game species. Resources for sport fishing activities are not present since the site does not support bodies of water. Because the site is private property (some of which is posted "No Trespassing", and because it lacks water, mesic areas or riparian vegetation communities that might be of interest, it is unlikely to be used for bird and/or wildlife watching. In short, primarily because of the lack of suitable habitat and non-private lands, fish and wildlife species of commercial and recreational value do not occur within the Project site or vicinity.

Focused Special Status Plant Surveys.

Plant taxa may be considered "sensitive" or “special status” due to declining populations, vulnerability to habitat change or loss or due to restricted distributions. Certain of these species have been listed as “Threatened” or “Endangered” by the FWS and/or the CDFG, and are thus protected by the federal and state Endangered Species Acts respectively. State-listed species and certain other desert-occurring plants are also protected under provisions of the California Native Plant Protection Act. Other species have been identified as sensitive or special status by USFWS and CDFG. Still others have been designated as special status species by private conservation organizations, including the CNPS and Audubon Society. Although some of these species have not been formally listed as “Threatened” or “Endangered,” impacts to these species may still be considered significant under CEQA.

Ten special status plant species have been reported in the vicinity of the Project site based on the literature review conducted. These species include small-flowered androstephium (*Androstephium breviflorum*), Palmer’s mariposa lily (*Chalochortus palmeri* var. *palmeri*), Plummer’s mariposa lily (*Calochortus plummerae*), Booth’s evening primrose (*Camissonia boothii ssp. boothii*), sagebrush loeflingia (*Loeflingia squarrosa var. artemisiarum*), Mojave monkeyflower (*Mimulus mohavensis*), Mojave fishhook cactus (*Sclerocactus polyancistrus*), short-joint beavertail (*Opuntia basilaris var. brachyclada*), southern skullcap (*Scutellaria bolanderi* spp. *Austromontana*), and San Bernadino asater (*Symphyotrichum defoliatum*). Of these species, small-flowered androstephium, Booth’s evening primrose, Mojave monkeyflower, Mojave fishhook cactus, sagebrush loeflingia, and short-joint beavertail are associated with vegetation communities or habitat types present on the site were determined to have a potential to occur onsite. Thus, focused rare plant surveys for these species were conducted.

Focused surveys for rare plant species potentially occurring on the Project site were conducted concurrently with the general biological resources assessment described above and the desert tortoise surveys. The survey area included the power plant site, laydown areas, and a portion of Segment 1. The remaining Project areas were not available during the 2006 spring survey season. Surveys were conducted during appropriate flowering periods for the annual species. It should be noted that the reduced amount and late timing of rainfall received in 2006 may have resulted in a poor germination year for annual flowering plant species in the area. Thus, annual flowering plants may have been undetectable at the time of the focused surveys. Results of the focused surveys are summarized below.

Small-flowered androstephium is designated as "rare, threatened, or endangered in California but common elsewhere" by CNPS. This species occurs within Mojave Desert Scrub plant communities, particularly within desert dune systems and sand fields at elevations between approximately 720 and 2,100 feet and has been reported to occur approximately one mile west of the terminus of Segment 2 (CNDDB 2006). Individuals of this species were not observed on the Project site during the focused surveys. Additionally, sand dune habitat is not present of the Project site and the very limited sandy areas that are intermittently present are considered to be marginal habitat for this species. Thus, there is a low potential for this species to occur within the Project site.

Booth's evening primrose is designated as "rare, threatened or endangered in California but more common elsewhere" by the CNPS. This species is associated with Joshua tree woodland and Pinyon-Juniper woodland vegetation communities between approximately 2,950 to 7,870 feet in elevation and is reported to occur within the Mojave River near Oro Grande, approximately one mile east-southeast of the Project site (CNDDB 2005). Additionally, Booth's Evening Primrose was reported to occur in the immediate vicinity of the site during biological field survey work conducted for the Southern California Logistics Airport (SCLA) Specific Plan Amendment and Rail Service Project (Tom Dodson Associates 2003). Booth's Evening Primrose was not observed during focused survey efforts conducted for this species. Additionally, sandy soils are limited on the Project site and considered to be marginal habitat for this species. Thus, there is a low potential for this species to occur within the Project site.

Mojave monkeyflower is designated as "rare, threatened, or endangered in California and elsewhere" and fairly endangered in the state by CNPS. This species is associated with Joshua tree woodland and Mojavean Desert Scrub, particularly in dry sandy and/or gravelly washes along the Mojave River, at elevations between 1,969-3,937 feet, and is known to occur between Helendale and Oro Grande, on the east side of the Mojave River. Mojave Monkeyflower was not observed during focused survey efforts for this species. Additionally, based on limited availability of suitable onsite habitat there is a low potential for this species to occur on the Project site.

Mojave fishhook cactus is designated as a "watch list" species by CNPS. This species is typically associated with well drained soils in rocky, gravelly mesas, slopes, and outcrops in Mojave desert scrub, Joshua tree woodland, and Great Basin scrub, often on limestone soils between approximately 2,100 and 7,600 feet. Mojave Fishhook Cactus was not observed on the Project site during the general biological and focused survey work conducted. However, several individuals of this species have been observed in a small "rivulet" located in the hills to the west of the VWWRA during biological field work conducted in 2003 for the SCLA Specific Plan Amendment and Rail Service Project (Tom

Dodson & Associates 2003). This location is within the ZOI of a portion of the Project's linear corridor. Given the negative results and general lack of onsite rocky areas, there is a low potential for the Mojave fishhook cactus to occur within the Project area. However, should any individuals of this species be located onsite during preconstruction surveys and/or during monitoring, they would either be avoided by construction or transplanted along with all of the other cacti as required by San Bernardino County ordinance and the Native Desert Plant Protection Act.

Short-joint beavertail is designated as "rare, threatened, or endangered in California and elsewhere" and "fairly endangered in California" by CNPS. This species is typically associated with Joshua tree woodland, Mojave Desert scrubs, Pinyon-juniper woodland, chaparral, and riparian woodlands with sandy soils or grantic loams. Habit for this species is present within areas of Segment 3. However, short-joint beavertail was not observed on the Project site during the focused surveys and is presumed to be absent from the Project site. Nevertheless, should any individuals of this species be found onsite during preconstruction surveys and/or during construction monitoring, they would either be avoided or transplanted along with other cacti as required by City and County ordinance.

Sagebrush loeflingia is designated as having between 1,000 to 3,000 individuals or 2,000 to 10,000 acres by the California state rank, and as having populations that are demonstrably secure to ineradicable due to being commonly found in the world by its global rank. This species typically occurs in desert dunes and sandy areas exhibiting Great Basin scrub and Sonoran desert scrub vegetation communities at elevations between 2,300 and 5,300 feet. Individuals of this species were not observed onsite during the rare plant survey. Additionally, sand dunes are not present onsite and the limited sandy areas present are considered to be marginal habitat for this species. Thus, there is a low potential for this species to occur within the Project site.

Focused Special Status Wildlife Surveys.

Focused surveys were conducted within the Project area for three special status species: desert tortoise, burrowing owl, and Mohave ground squirrel. The survey methods and results are described below and results are shown on Figure 6.4-3.

Desert Tortoise (*Gopherus agassizii*)

The Project site is outside the designated Critical Habitat for the desert tortoise (at its closest point, Critical Habitat for the desert tortoise is more than a mile from the site), as shown on Figure 6.4-4. Focused surveys for the desert tortoise were conducted in March, April, May, November, and December of 2006 and January of 2007. Surveys were

conducted over the Project site in accordance with approved protocols specified in "Field Survey Protocol for Any Non Federal Action That May Occur within the Range of The Desert Tortoise" (FWS 1992).

Belt transects of 30 feet in width were walked throughout the various areas proposed for Project development. Desert woodrat (*Neotoma lepida*) middens and animal burrows (e.g., desert tortoise, kit fox, coyote, ground squirrel, etc.) were carefully inspected for presence of desert tortoises and/or their sign (i.e., live tortoises, burrows, scat, carcass, and fragments thereof, tracks, courtship rings, drinking depressions, etc.). Desert tortoise sign was documented on appropriate survey forms, photographed, and mapped. ZOI surveys were conducted in all directions around the Project area at transect intervals of 100', 300', 600', 1,200' and 2,400'.

During the course of the focused surveys six desert tortoises (two within the Project Area and four within the adjacent ZOI) were observed (see Figure 6.4-3). Additionally, 39 desert tortoise burrows, 29 desert tortoise scat, and five carcasses were recorded. No federal land or designated critical habitat is encompassed within the Project Area. However, adjacent BLM land has been designated Category III desert tortoise habitat with an estimated 1984 density of 0-20 desert tortoises per square mile (BLM 2006).

In 2003, eight live desert tortoises were reported occurring in the area covered by the SCLA Specific Plan Amendment and Rail Service Project area, which overlaps with portions of the VV2 Project site (Tom Dodson Associates 2003). The portion of the Project's reclaimed water pipeline alignment within VVWRA property was not included in the surveys because VVWRA personnel indicated that this area had previously been cleared of desert tortoises and tortoise-proof exclusion fences were installed along the perimeter of the VVWRA facility. However, some areas of the VVWRA facility were observed not to have tortoise proof fencing installed, and thus, it is possible that desert tortoise may occupy areas of the VVWRA facility. The fenced VWWRA facility was reported by Tom Dodson Associates (2003) as having active tortoise burrows.

Photographs of representative habitat and desert tortoise sign observed within the Project area as well as completed survey data forms are provided in AFC Appendix H.

Mohave Ground Squirrel (*Spermophilus mohavensis*)

Focused visual and trapping surveys for the Mohave ground squirrel were conducted between April and July of 2006 in accordance with the latest Mohave Ground Squirrel Survey Guidelines (CDFG 2003). Due to the size of the proposed Project area and existing habitat disturbances, it was determined that three trapping grids, each consisting of 100

traps (10 rows of 10 traps), were sufficient to adequately sample the power plant site. In addition, it was determined that two linear grids consisting of four rows of 25 traps would sufficiently sample the water pipeline and transmission line alignments. One grid covered the western laydown area and one grid covered the southern laydown area. A "Plan of Work" for the MGS trapping protocol was approved by Ms. Tonya Moore of CDFG. A Survey and Trapping Form was completed for each trapping grid. These forms are provided in AFC Appendix H as part of the entire Mohave ground squirrel survey report.

No Mohave ground squirrels were captured or observed within the Project area during the 2006 focused surveys. However, the Project site provides potentially suitable habitat for this species. Additionally, the CNDDB records indicate that an individual was observed on or near the southern laydown area in 1987. Two visual sightings of this species were reported in 2003 by biologists conducting surveys for the SCLA Specific Plan Amendment and Rail Service Project (Tom Dodson Associates 2003), whose site overlaps with the VV2 Project site, but the exact locations of these 2003 sightings were not provided. More recently, an individual of the species was trapped in 2004 from a site along U.S. Highway 395, approximately two miles west-southwest of the project site (S. Montgomery 2006; T Moore 2006.).

Despite the fact that this species was not captured or observed within the Project area during the focused surveys conducted for the VV2 Project, the decision has been made to assume that the species is present at the Project site based on the presence of potentially suitable habitat and the reported sightings discussed above in the vicinity of the Project area. Thus, additional focused surveys are not planned.

Burrowing Owl (*Athene cunicularia*)

Focused surveys for the burrowing owl were conducted throughout areas of suitable habitat of the power plant site, construction staging areas and a portion of Segment 1. The remaining portions of the Project (portions of Segment 1, and Segments 2 and 3) were not surveyed as these areas were not available for survey until after the end of the burrowing owl breeding season. Surveys were conducted using transects spaced no more than 100 feet apart in accordance with protocol established by the CDFG Staff Report on Burrowing Owl Mitigation (1995). The suitable areas of the Project site were surveyed in July and August 2006 both in the late afternoon (within the recommended time period of two hours before sunset to one hour after sunset) and during the morning (within the recommended time period of one hour before sunrise to two hours after sunrise). Binoculars were used to scan fences, posts, and other structures that might be used as perches by burrowing owls. Burrows were examined for sign of this species (i.e. feathers, whitewash, and/or pellets).

Several surveys were invalidated and required repeat (make-up) surveys due to excessive wind speeds (see below).

Evidence of burrowing owls (i.e., burrows exhibiting whitewash, feathers, pellets, etc.) in addition to live burrowing owls were observed throughout various areas of the Project site, 500-foot buffer areas, and 2,400-foot ZOI. A total of four live owls were observed. Project areas where burrowing owls were identified are shown on Figure 6.4-3. One was in the ZOI of the one of the construction staging areas, approximately 900 feet northwest of the northwest corner of the western construction laydown area. Another was in the buffer zone of Segment 1 of the transmission line corridor, approximately 300 feet southwest of the ROW. The two other owls were observed within an area of Segment 2 of the transmission line corridor. One was outside the existing transmission line corridor approximately 120 feet away from one of the proposed pulling areas for transmission line stringing. The other was located within the existing transmission line corridor, directly under an existing transmission line, approximately 220 feet away from the centerline of the location of the proposed new line. Although most of these owls are technically offsite (outside the proposed disturbance footprint), three are within the 500-foot buffer zone area as defined by the Burrowing Owl Consortium Survey Guidelines. One burrowing owl carcass/remains was also observed at one location along Segment 1.

Burrowing owl sign was observed throughout various areas of the site during the focused burrow search and during survey work conducted for Mohave ground squirrel and desert tortoise. Additionally, at least 40 burrows of small mammals (primarily ground squirrels), 36 burrows or colonies of kit fox, and 39 desert tortoise burrows were observed across much of the site and within the ZOI. These burrows provide ample nesting opportunities for this fossorial species, and many of the burrows observed that exhibited burrowing owl sign are either currently or were historically also occupied by kit foxes and or desert tortoises. Figure 6.4-3 illustrates the locations of identified owl burrows.

Jurisdictional Waters Delineation

A delineation of “Waters of the United States”(WUS) and “waters of the state of California (WSC) was conducted to comply with requirements of the federal Clean Water Act and Section 1602 of the California Fish and Game Code. Jurisdictional determinations were made using methods approved by the USACE and CDFG including identification of Ordinary High Water Mark (OHWM) indicators and presence of bed and bank features, respectively.

The watercourses within transmission line Segments 1, 2, and 3 were assessed on the characteristic physical and biological features associated with desert washes and other

dryland fluvial systems. Ephemeral washes were visually identified within 100 feet of the proposed utility line corridor.

Jurisdictional delineations within Segment 1 were conducted by walking the streambeds within approximately 100 feet of the linear facility corridors and measuring the widths of the jurisdictional limits with the aid of a field measuring tape at approximately 30-foot intervals, based on the geo-morphological configuration of the channel. GPS points were taken with hand-held units at some of the intervals to verify corresponding site linear locations on the map. The jurisdictional width values were then summed for these watercourses and average widths calculated.

Delineation of waterways within Segment 2 and Segment 3 were conducted by walking the streambeds within approximately 100 feet of the transmission line ROW. Jurisdictional boundaries were delineated using a Trimble Geo XR GPS. The GPS receiver and data collector were operated following manufacturer's recommendations for obtaining sub-meter accuracy. Post-processing of the data was carried out using Pathfinder Office software and electronic Geographic Information Systems (GIS) shape files were created. GIS data was geo-referenced to aerial photography to produce figures with visible boundary lines of jurisdictional waters. The average widths of jurisdictional waters were calculated using GIS shape files.

Jurisdictional delineation surveys indicate that there are no wetlands within the power plant site or laydown areas. However, ephemeral washes (drainages) were recorded along the Project's linear features, including 40 drainages along transmission line Segment 1, 10 along Segment 2 and 5 in Segment 3 (see Figure 6.4-5). All jurisdictional waters found in the Project area are part of dryland fluvial systems that lack wetlands as defined by the USACE and riparian habitat as defined by the CDFG.

It should be noted that USACE and CDFG maintain the ultimate authority in determining the jurisdictional status of WUS and WSC.

Waters of the United States

The majority of ephemeral drainages determined to be WUS had an observable, overland connection with the Mojave River or Oro Grande Wash, both federally regulated WUS. Overall, 54 of the 55 total jurisdictional waters identified in the Project area were determined to be WUS subject to the jurisdiction of the USACE.

Waters of the State

All 55 drainages identified within the three proposed electrical transmission line corridors were determined to be WSC subject to the jurisdiction of the CDFG. Of these, 54 were also determined to be WUS. The remaining drainage along Segment 1 was determined to be solely a WSC.

Wildlife Movement Corridors

Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally defined as linear features along which animals can travel from one habitat or resource area to another. A wildlife corridor study was not conducted as part of the proposed Project since extensive long-term species ecology, movement patterns, and dispersal behavior would be required to conclusively demonstrate if a particular site or feature of a site served as an important movement corridor. This type of data is unavailable for most of the species occurring or potentially occurring on the Project site. However, drainages, ridgelines and other natural and manmade linear features and barriers often serve as areas that wildlife routinely use to access essential natural resources. It is assumed that wildlife species use such features within the Project area for movement.

The Mojave River is well documented as a valuable corridor for movement of wildlife species and migratory birds in particular, between the San Bernardino Mountains to the south and the Mojave Desert and areas further to the north. Areas adjacent to the Mojave River almost certainly serve as movement corridors providing access to the resources associated with the river. This was witnessed on several occasions during the field studies through observations of bald eagle, Swainson's hawk, turkey vulture (*Cathartes aura*), hermit warbler (*Dendroica occidentalis*), Wilson's warbler (*Wilsonia pusilla*) made either on the Project site or over the Mojave River.

6.4.3 Environmental Impacts

A project's impacts on biological resources may be direct or indirect. Direct impacts occur when biological resources are altered or destroyed during the course, or as a result of, project implementation. Examples of such impacts include removal or grading of native vegetation, substantial loss of foraging or nesting habitat and loss of individuals of special status species as a result of habitat clearing. Indirect impacts may include elevated noise levels, excessive night lighting within habitats utilized by wildlife, generation of dust from construction activities and increased erosion or sedimentation. Both direct and indirect impacts are addressed below.

6.4.3.1 Impact Significance

Impacts to biological resources were assessed in terms of the CEQA criteria and through review of the VV2 Project's consistency with the applicable local and regional conservation and resource protection plans or ordinances. There would be significant effect on biological resources if the Project would**:**

- Have a substantial adverse effect, either directly or indirectly through habitat modification, on a candidate threatened or endangered species or the habitat of such a species;
- Have a substantial adverse effect on a sensitive natural community identified in local or regional plans;
- Interfere substantially with the movement of any resident or migratory fish or wildlife species; or
- Have a substantial adverse effect on federally protected wetlands.

6.4.3.2 Direct Impacts

Direct impacts are effects to natural resources supporting biological systems caused by a project action which occur at the same time and place as initial construction or operation activities. Examples of direct impacts include any action resulting in the loss or alteration of a native plant community or wildlife habitat component; those actions resulting in the injury/mortality of any wildlife species; or those which cause aberrant animal behavior. Such impacts also include the excavation and removal of native soils during construction or operations from a jurisdictional water or state streambed; the placement of fill material within a jurisdictional water/state streambed during construction or operations; or effects to surface and/or subsurface water quality during construction or project operations.

Direct impacts can be long term or temporary in nature. Long term and permanent impacts are those actions that result in irreversible damage to, or loss of, natural resources associated with biological systems. Long term impacts are defined as those actions that result in the inability to recover or restore an area to a natural state within a period of three years.

Examples of long term/permanent impacts include site grading for construction, as well as surface disturbance associated with equipment staging areas, large vehicle parking and equipment unloading zones, pipeline trench excavation and new access road installation.

Temporary impacts are considered to be those changes in the local environment that do not extend substantially beyond the term of initial project work completion. Examples of temporary impacts include minor damage to vegetation which does not result in the removal of perennial shrub crowns or tree removal, cross-country vehicle travel over undisturbed terrain, assembly or placement of project structures or equipment on undisturbed areas.

Direct Impacts to Plant Communities.

The VV2 Project would directly impact plant communities within the Project site. These impacts would be both permanent and temporary in nature. The Project would result in the excavation and removal of native soils and the permanent loss of vegetation on approximately 342 acres of land known to be occupied, presumed to be occupied, and/or known to be suitable habitat for a variety of special status species including the desert tortoise, Mohave ground squirrel, burrowing owl and Le Conte's thrasher. The loss of these vegetation communities is considered a direct, permanent impact. The remaining 57 acres is disturbed/developed or non-native grassland that does not provide habitat for special status species.

Additionally, the proposed Project would result in approximately 66 acres of temporary impacts to natural areas along the electrical transmission line corridor in Segments 1, 2, and 3 due to surface disturbance activities. No temporary surface disturbance impacts are expected to occur on the power plant site, the two construction staging areas, or within the ROWs of the two pipelines, as the impacts associated with these are features permanent in nature.

The amount of each vegetation community that will be directly impacted within each Project area is discussed in the following subsections.

Power Plant Site. Construction activities (i.e. surface disturbance and grading) associated with the immediate footprint of the plant site would result in the removal of approximately 338 acres of natural topography and associated topsoil. These activities will result in permanent impacts to 285 acres of Mojave creosote bush scrub, three acres of non-native grassland, and 50 areas of disturbed/developed areas. No temporary impacts to plant communities will occur within the power plant site.

Mojave creosote bush scrub is a native vegetation community that provides suitable habitat for the desert tortoise, Mohave ground squirrel, burrowing owl, and Le Conte's thrasher, as well as several special status plant species and nesting birds. The remaining 53 acres are currently either developed/disturbed or vegetated with non-native grassland that offers little

habitat value for most these species; the exception being ground nesting bird species. Additionally, two live desert tortoises and burrowing owl sign were observed within the proposed power plant site. Thus, direct impacts from loss of habitat and/or injury/mortality of individuals would occur to the desert tortoise, Mohave ground squirrel, nesting birds and possibly to burrowing owl and potentially occurring special status plant species. Direct impacts to the desert tortoise, Mohave ground squirrel, burrowing owl, and nesting bird species would be reduced to a less than significant level through implementation of mitigation measures including: participating in a federal ESA Section 7 consultation with the USFWS and issuance of a Project BO (for the desert tortoise); obtaining from CDFG a CESA Section 2080.1 concurrence with the Project BO (for the desert tortoise) and a CESA Section 2081 incidental take permit (for the Mohave ground squirrel); conducting offsite habitat compensation; and implementing species-specific impact minimization measures for all species impacted. A detailed discussion of these mitigation measures is provided in Section 6.4.4.

Direct impacts to potentially-occurring special status plant species (i.e., small-flowered androstephium, Booth's evening primrose, sagebrush loeflingia, and Mojave monkeyflower) are not likely due to the very limited amount of marginally-suitable habitat present for these species within this Project feature. This area of the site lacks washes, drainages and extensively sandy or gravelly soils. Nevertheless, direct impacts to these species (if any) would be reduced to a less than significant level by: 1) avoiding impacts to the areas most likely to support these species (i.e., washes and drainages); 2) conducting focused surveys for these species throughout potentially-suitable areas of the site during the appropriate survey period prior to the start of Project construction; and 3) notification to the CDFG at least 10 days prior to the commencement of Project construction to allow for salvage of these species (if found to be present). Furthermore, clearance surveys and biological monitoring would be conducted throughout all areas of the Project site prior to and during ground disturbance; should any special status plant species be detected during these surveys and monitoring, CDFG would be notified and appropriate action (if any) would be implemented.

Laydown Areas**.** Construction activities within the immediate footprint of the construction laydown areas would result in the removal of natural topography and associated topsoil on approximately 50 acres of Mojave creosote bush scrub. These activities would result in the permanent loss of this vegetation community which provides suitable habitat for the desert tortoise, Mohave ground squirrel, burrowing owl, Le Conte's thrasher, nesting bird species and possibly several special status plant species. Desert tortoise sign and burrows suitable for burrowing owls were observed within the southern construction staging during focused field surveys. The Mohave ground squirrel is assumed to be present on this area of the site.

Thus, permanent impacts would occur to the desert tortoise, Mohave ground squirrel, nesting birds and possibly the burrowing owl and potentially occurring special status plant species from loss of habitat and/or injury/mortality of individuals. No temporary impacts to plant communities will occur within the construction laydown areas.

Direct impacts to desert tortoise, Mohave ground squirrel, nesting birds and burrowing owl would be reduced to a less than significant level through implementation of mitigation measures including: participating in a federal ESA Section 7 consultation with the USFWS and issuance of a Project BO; obtaining from CDFG a CESA Section 2080.1 concurrence with the Project BO (for desert tortoise) and a CESA Section 2081 incidental take permit (for Mohave ground squirrel); conducting offsite habitat compensation; and implementing species specific impact minimization measures for all species impacted. A detailed discussion of these mitigation measures are provided in Section 6.4.4.

Direct impacts to potentially-occurring special status plant species (i.e., small-flowered androstephium, Booth's evening primrose, sagebrush loeflingia, and Mojave monkeyflower) are not likely due to the very limited amount of marginally-suitable habitat present for these species within this Project feature. These areas of the site lack washes, drainages and extensively sandy or gravelly soils. Nevertheless, direct impacts to these species (if any) would be reduced to a less than significant level by: 1) avoiding impacts to the areas most likely to support these species (i.e., washes and drainages); 2) conducting focused surveys for these species throughout potentially-suitable areas of the site during the appropriate survey period prior to the start of Project construction; and 3) notification to the CDFG at least 10 days prior to the commencement of Project construction to allow for salvage of these species (if found to be present). Furthermore, clearance surveys and biological monitoring would be conducted throughout all areas of the Project site prior to and during ground disturbance; should any special status plant species be detected during these surveys and monitoring, CDFG would be notified and appropriate action (if any) would be implemented.

Linear Features Routes.

Direct impacts to plant communities located within Project linear routes are discussed below.

Transmission Line Segment 1/Reclaimed Water Pipeline/Sanitary Wastewater Pipeline For purposes of this discussion, Segment 1 also encompasses the reclaimed water pipeline and sanitary wastewater pipeline. Surface disturbance and grading activities associated with Segment 1 construction are anticipated to result in the excavation and removal of topography and topsoil on land, supporting Mojave creosote bush scrub (seven acres), and

desert saltbush scrub (less than 0.1 acre), as well as four acres of disturbed/developed areas. Additionally, construction of the structures within Segment 1 would temporarily impact approximately two acres of Mojave creosote bush scrub and 0.2 acres of desert saltbush scrub.

Specific impacts attributable to different Project components within Segment 1 are discussed separately below.

Approximately three acres of natural topography and associated topsoil would be permanently removed as a result of construction of the electrical transmission lines within Segment 1. This would include the loss of approximately three acres of Mojave creosote bush scrub and 100 sq. ft. of desert saltbush scrub. The Mojave creosote bush scrub and desert saltbush scrub are vegetation communities that provide suitable habitat for the desert tortoise, Mohave ground squirrel, Le Conte's thrasher, and San Emigdio blue butterfly. Desert tortoise and burrowing owl sign (i.e., burrows, scat, carcasses, whitewash) were observed within the ROW of the electrical transmission line within Segment 1. Additionally, live desert tortoises and live burrowing owls were observed within the respective ZOI and 500-foot buffer zone areas for these species. Thus, permanent impacts would occur to the desert tortoise, Mohave ground squirrel, nesting birds, and possibly the burrowing owl and San Emigdio blue butterfly as a result of the loss of habitat and/or injury/mortality of individuals. Additionally, 40 ephemeral washes determined to be jurisdictional waters have the potential to be directly impacted by surface disturbing activities associated with construction of the electrical transmission lines and access roads along Segment 1. The Project, however, has been designed to avoid impacts to these washes.

Permanent impacts to approximately 2.5 acres of topography and soils, as well as long-term loss of Mojave creosote bush scrub, would result from construction and installation of the reclaimed water pipeline. The remaining 2.5 acres of this pipeline route are currently developed or disturbed by the VVWRA facility and thus do not provide suitable habitat for the desert tortoise or Mohave ground squirrel. Mojave creosote bush scrub provides suitable habitat for the desert tortoise, Mohave ground squirrel, Le Conte's thrasher, burrowing owl, nesting birds, and the potentially-occurring special status plant species. Desert tortoise and burrowing owl sign (i.e., burrows, scat, carcasses, whitewash) were observed within the ROW of this pipeline within Segment 1. Additionally, live desert tortoises and live burrowing owls were observed within the respective ZOI and 500-foot buffer zone areas of this Project feature for these species. A portion of the developed/disturbed lands along a portion of the pipeline route within the VVWRA treatment facility is located adjacent to treatment ponds that may provide habitat for the southwestern pond turtle.

Permanent impacts to approximately three acres of topography and soils, as well as long-term loss of Mojave creosote bush scrub, would result from construction and installation of the sanitary wastewater pipeline. The remaining one acre of this Project feature is located within a previously disturbed dirt road adjacent to the VVWRA facility and thus does not provide suitable habitat for the desert tortoise or Mohave ground squirrel. Mojave creosote bush scrub provides suitable habitat for the desert tortoise, Mohave ground squirrel, Le Conte's thrasher, burrowing owl, nesting birds, and the potentially-occurring special status plant species. Desert tortoise and burrowing owl sign (i.e., burrows, scat, carcasses, whitewash) were observed within the ROW of this pipeline. Additionally, live desert tortoises and live burrowing owls were observed within the respective ZOI and 500-foot buffer zone areas of this Project feature. Additionally, two ephemeral washes, one determined to be a WSC only and the other a WSC and a WUS, have the potential to be directly impacted by surface disturbing activities associated with construction of the sanitary waste water pipeline along Segment 1. The Project, however, has been designed to avoid these washes.

In addition to permanent impacts, construction within Segment 1 would temporarily impact approximately seven acres of Mojave creosote bush scrub and 0.2 acres of desert saltbush scrub. Temporary impacts to these vegetation communities would not be considered significant. However, injury/mortality to any of these species as well as the potentially-occurring southwestern pond turtle and San Emigdio blue butterfly and within the proposed impact area would be considered significant.

Direct impacts to the desert tortoise, Mohave ground squirrel, burrowing owl, and nesting bird species would be reduced to a less than significant level through implementation of mitigation measures including: participating in a federal ESA Section 7 consultation with the USFWS and issuance of a Project BO; obtaining from CDFG a CESA Section 2080.1 concurrence with the Project BO (for desert tortoise) and a CESA Section 2081 incidental take permit (for Mohave ground squirrel); offsite habitat compensation; and species-specific impact minimization measures.

Direct impacts to the potentially occurring San Emigdio blue butterfly are not considered significant due to the very limited amount (less than 100 sq. ft.) of potentially suitable desert saltbush scrub habitat that would be permanently impacted by two transmission line towers that are proposed to be placed in this vegetation community. The Project has been designed to avoid all washes that may also provide potentially-suitable habitat for this species. This impact to approximately 100 sq. ft. of potentially suitable habitat for this species considered to be negligible.

Potential direct impacts to the southwestern pond turtle are not likely due to the location of Project features within existing compacted roadways in the areas of concern and thus are not considered significant. However, to minimize the potential for impacts for this species from Project construction activities, a biological monitor will be present to oversee ground disturbance activities and will conduct daily clearance surveys during these activities.

Direct impacts to potentially-occurring special status plant species (i.e., small-flowered androstephium, Booth's evening primrose, sagebrush loeflingia, and Mojave monkeyflower) are not likely due to the limited amount of marginally-suitable habitat present for these species within this Project feature. Soils containing the most sand and gravel within this area of the Project site are located within the washes and drainages. The Project has been designed to avoid impacts to the onsite washes and drainages. Significant direct impacts to these species (if any) would be mitigated to less than significant by: 1) avoiding impacts to the areas most likely to support these species (i.e., washes and drainages); 2) conducting focused surveys for these species throughout potentially-suitable areas of the site during the appropriate survey period prior to the start of Project construction; and 3) notification to the CDFG at least 10 days prior to the commencement of Project construction to allow for salvage of these species (if found to be present). Furthermore, clearance surveys and biological monitoring would be conducted throughout all areas of the Project site prior to and during ground disturbance. Should special status plant species be detected during these surveys and monitoring, CDFG would be notified and appropriate action (if any) would be implemented.

Direct impacts to jurisdictional waters are not anticipated as the Project is currently designed to avoid direct impacts to these areas. However, if it is determined later that direct impacts cannot be avoided, mitigation measures would be implemented to reduce these impacts to a less than significant level.

A detailed description of these mitigation measures is provided in Section 4.6.6.

*Transmission Line Segment 2***.** Construction activities associated with the proposed placement of six new power poles within transmission line Segment 2 are anticipated to result in the permanent removal of natural topography and topsoil on approximately 0.13 acres of land supporting Mojave creosote bush scrub. This vegetation community provides suitable habitat for the desert tortoise, Mohave ground squirrel, burrowing owl, Le Conte's thrasher, nesting birds, and potentially-occurring special status plant species. Additionally, although focused surveys have not been conducted in this area, two live burrowing owls were observed within the 500-foot buffer zone area to portions of this Project feature. Thus, direct impacts to these species would occur due to loss of habitat.

Construction of the structures within Segment 2 would also temporarily impact approximately two acres of Mojave creosote bush scrub. Temporary impacts to this vegetation community would not be considered significant. However, injury/mortality to any special status species would be considered significant if not avoided or mitigated.

Direct impacts to the desert tortoise, Mohave ground squirrel, burrowing owl, and Le Conte's thrasher would be reduced to a less than significant levels through implementation of mitigation measures including participating in a federal ESA Section 7 consultation with the USFWS and issuance of a Project BO, obtaining from CDFG a CESA Section 2080.1 concurrence with the Project BO (for desert tortoise) and a CESA Section 2081 incidental take permit (for Mohave ground squirrel), offsite habitat compensation and species specific impact minimization measures.

Direct impacts to potentially-occurring special status plant species (i.e., small-flowered androstephium, Booth's evening primrose, and sagebrush loeflingia) are not likely due to the very limited amount of marginally-suitable habitat present for these species within this Project feature. Significant direct impacts to these species (if any) would be reduced to a less than significant level by: 1) avoiding impacts to the areas most likely to support these species (i.e., washes and drainages); 2) conducting focused surveys for these species throughout potentially-suitable areas of the site during the appropriate survey period prior to the start of Project construction; and 3) notification to the CDFG at least 10 days prior to the commencement of Project construction to allow for salvage of these species (if found to be present). Furthermore, clearance surveys and biological monitoring would be conducted throughout all areas of the Project site prior to and during ground disturbance. Is special status plant species were detected during these surveys and monitoring, CDFG would be notified and appropriate action (if any) would be implemented.

Additionally, ten ephemeral washed determined to be WSC and WUS have the potential to be directly impacted by surface disturbing activities associated with construction of the electrical transmission lines along Segment 2. The Project is currently designed to avoid direct impacts to these areas. However, if direct impacts cannot be avoided, mitigation measures would be implemented to reduce these impacts to a less than significant level.

A detailed discussion of these minimization measures are provided in Section 4.6.6.

Transmission Line Segment 3. Installation of the proposed electrical transmission line structures within Segment 3 would require vegetation removal in the location of the tower footings only. These activities would result in the permanent removal of topography and soils on approximately 0.3 acres of land supporting Mojave creosote bush scrub (0.13 acres) and Mojavean juniper woodland and scrub (0.17 acres). Additional temporary

impacts would occur to approximately 32 acres of Mojave creosote bush scrub and 23 acres of Mojavean juniper woodland and scrub. Temporary impacts to these vegetation communities would not be considered significant. However, injury/mortality to the special status species potentially occurring within these communities would be considered significant if not avoided or mitigated.

These vegetation communities provide suitable habitat for the desert tortoise, Mohave ground squirrel, burrowing owl, San Diego coast horned lizard, and a variety of nesting and migratory birds. Permanent impacts to these species would occur due to loss of habitat.

Direct impacts to these species would be reduced to a less than significant level through implementation of mitigation measures including: participating in a federal ESA Section 7 consultation with the USFWS and issuance of a Project BO; obtaining from CDFG a CESA Section 2080.1 concurrence with the Project BO (for desert tortoise) and a CESA Section 2081 incidental take permit (for Mohave ground squirrel); offsite habitat compensation; and species-specific impact minimization measures.

Several burrows that are suitable for burrowing owl occupation were observed within Segment 3. Thus, there is the potential for direct Project impacts to burrowing owl. Focused surveys for this species should be conducted in accordance with CDFG survey guidelines to determine if the species is present in Segment 3. Direct impacts (if any) to the burrowing owl in this area would be reduced to a less than significant level through the measures outlined in Section 6.4.4.

Direct impacts to potentially-occurring special status plant species (i.e., small-flowered androstephium, Booth's evening primrose, and sagebrush loeflingia) are not likely due to the very limited amount of marginally-suitable habitat present for these species within this Project feature. Potentially significant direct impacts to these species (if any) would be reduced to a less than significant level by: 1) avoiding impacts to the areas most likely to support these species (i.e., washes and drainages); 2) conducting focused surveys for these species throughout potentially-suitable areas of the site during the appropriate survey period prior to the start of Project construction; and 3) notification to the CDFG at least 10 days prior to the commencement of Project construction to allow for salvage of these species (if found to be present). Furthermore, clearance surveys and biological monitoring would be conducted throughout all areas of the Project site prior to and during ground disturbance. Should special status plant species be detected during these surveys and monitoring, CDFG would be notified and appropriate action (if any) would be implemented.

Additionally, five ephemeral washed determined to be WSC and WUS and have the potential to be directly impacted by surface disturbing activities associated with construction of the electrical transmission lines along Segment 3. The Project is currently designed to avoid direct impacts to these areas. However, if direct impacts cannot be avoided, mitigation measures would be implemented to reduce these impacts to a less than significant level. A detailed description of these mitigation measures is provided in Section 6.4.4.

Direct Impacts to Special Status Plant Species. No Federal or State listed plant species are known to occur in the Project area. However, four special status plant species (Joshua trees, silver cholla, pencil chola and beavertail cactus) occur and four special status species (small-flowered androstephium, Booth's evening primrose, sagebrush loeflingia, and Mojave monkeyflower) have a low to moderate potential to occur within the Project area. Direct impacts to these species are discussed below.

It should be noted that because of the planned use of natural gas that contains only trace quantities of sulfur, and the use of NO_x emission control technologies, no significant impacts to vegetation including special status species are expected from project air emissions. Cooling tower fugitive dust emissions (e.g., dissolved solids evaporated from the cooling water) are not expected to have significant impacts to plant life since they are designed to meet air quality standards designed to protect human health and are more stringent than standards that would be protective of plant life. Thus, project fugitive dust emissions would not be expected to have a significant adverse affect on vegetation including special status species.

Additionally, the specific composition of dissolved solids in the cooling water was reviewed for potential toxicity of individual components to plants. Some of the dissolved solids contained in the cooling water (e.g., sulfate, calcium, and magnesium) are plant nutrients. Emissions of the dissolved solids in the project cooling water would be low. When atmospheric dispersion of these solids is considered, deposition levels on vegetation near the Project facility would have insignificant impacts on vegetation and special status plant species.

<u>Small-flowered androstephium, Booth's evening primrose, sagebrush loeflingia, and Mojave monkeyflower</u>

These species have been reported in the vicinity of the VV2 Project. Individuals of these species found to occur onsite could be directly impacted by Project activities. However, little, if any, suitable habitat (i.e., gravelly and sandy washes) to support these species occurs within the Project site. Thus, these species are considered to have low to moderate

potential to occur. Additionally, the Project has been designed to avoid all impacts to onsite washes. For these reasons, Project impacts to this species are not expected.

Joshua Tree (*Yucca brevifolia*)

Joshua Trees would be lost as a result of Project activities throughout various areas of the site, particularly on the power plant site, the two adjacent staging areas, and possibly along the three segments of the linear features, as this species is present throughout all areas of the site. Direct impacts to Joshua trees would be reduced to a less than significant level with implementation of the mitigation measures outlined in Section 6.4.4. These mitigation measures include transplanting potentially impacted Joshua trees and utilizing them as part of the landscaping along the perimeter of the project site.

Cacti (*Oppuntia ssp.*)

Three native cacti species, Silver Cholla, Pencil Cholla, and Beavertail (*Opuntia* spp.) occur throughout the Project site and would be directly impacted from grading activities. Per California's Native Plant Protection Act, native cacti species are protected. Additionally, two sensitive species of cacti (i.e., Mojave fishhook cactus and short-joint beavertail) have been reported from the vicinity of the site. If present within areas directly impacted by Project implementation, these cacti species would be lost. Direct impacts to native cacti from the proposed Project would be reduced to a less than significant level with implementation of the mitigation measures outlined in Section 6.4.4. These mitigation measures include transplanting potentially impacted cacti and utilizing them as part of the landscaping along the perimeter of the project site and/or site restoration.

Direct Impacts to Special Status Wildlife Species. Implementation of the Project has the potential to directly impact several special status wildlife species. The potential impacts to these species are discussed below.

San Emigdio blue butterfly (*Plebulina emigdionis*)

Development of the two transmission line tower locations would result in a total of approximately 100 sq. ft. of permanent loss of the desert saltbush scrub vegetation community that may provide suitable habitat for this special status butterfly. Direct impacts to this species are not considered significant due to the very limited amount of potentially suitable desert saltbush scrub habitat that would be permanently impacted and the Project has been designed to avoid all washes that may also provide potentially-suitable habitat for this species. Impacts to approximately 100 sq. ft. of potentially suitable habitat for this species are considered negligible.

Southwest pond turtle (*Clemmys marmorata pallida*)

Although considered unlikely, individuals of this species may be injured or taken during Project activities conducted along the portion of the reclaimed water pipeline within the VVWRA treatment facility. Direct impacts to this species would be reduced to a less than significant level with implementation of the mitigation measures outlined in Section 6.4.4, which include: 1) confining all Project construction and associated activities to existing compacted perimeter access roads and 2) conducting daily clearance surveys in this area.

Desert tortoise (*Gopherus agassizii*)

Desert tortoises, as well as recently-used burrows and sign of the species, have been observed within the Project area. Thus, Project construction has the potential for direct impacts to individual tortoises.

Direct impact would include permanent and temporary loss of approximately 401 acres of desert tortoise habitat and potential "take" of these animals. These impacts would be reduced to a less than significant level with the implementation of mitigation measures that include: participating in a federal ESA Section 7 consultation with the USFWS and issuance of a Project BO:, obtaining from CDFG a CESA Section 2080.1 concurrence with the Project BO; offsite habitat compensation; and impact minimization measures specific to this species. Mitigation measures proposed as part of the VV2 Project are outlined in Section 6.4.4 and include pre-construction surveys for this species, relocation of individuals found within the Project site, excavation of onsite burrows, installation of temporary fencing around construction site following site clearance, and offsite compensation. Implementation of these mitigation measures will reduce the impacts to this species to a less than significant level.

San Diego Coast Horned Lizard (*Phrynosoma cornatum blainvillii*)

Development of the transmission line within the southern portions of Segment 3 has the potential to directly impact the San Diego coast horned lizard. This impact would result from the permanent and temporary direct loss of 23 acres of Mojavean juniper woodland and scrub. Direct impacts to this species would be reduced to a less than significant level with the implementation of mitigation measures, including avoiding impacts to onsite washes and biological monitoring. These measures are summarized in Sections 6.4.4.

Mojave River Vole (*Microtus californicus mohavensis*)

Development of the Project features within Segment 1 has the potential to directly impact the Mojave River vole. This potential impact would result from the possibility of direct

mortality or injury resulting from Project activities located adjacent to this species habitat. Direct impacts to this species would be avoided because the Project has been designed to avoid impacts to all onsite washes and biological monitoring also will be conducted. Implementation of these measures would reduce potential impacts to this species to a less than significant level. These mitigation measures are detailed in Sections 6.4.4.

Mohave ground squirrel (*Spermophilus mohavensis*)

Although extensive surveys have been conducted on the project site for Mohave ground squirrel and no individuals of that species have been found, the Mohave ground squirrel nevertheless is assumed to be present within the Project area, based on the presence of potentially suitable habitat for this species and reported sightings of individual Mohave ground squirrels in the vicinity of the Project area. Thus, construction of the proposed Project has the potential to directly impact Mohave ground squirrel habitat and individuals located within all suitable habitat affected by Project activities. Direct impacts to this species would be reduced to a less than significant level with implementation of mitigation measures proposed as part of the Project and outlined in Section 6.4.4 that include construction site monitoring by a qualified biologist and offsite habitat compensation. Implementation of these mitigation measures would reduce the impacts to this species to a less than significant level.

Burrowing owl (*Athene cunicularia*)

Burrowing owls and burrows with indications of past burrowing owl use have been observed within the Project area. Thus, construction of the VV2 Project has the potential to directly impact individuals located within the Project area.

Direct impacts to this species would be reduced to a less than significant level with implementation of mitigation measures proposed as part of the Project and outlined in Section 6.4.4 that include: conducting burrowing owl focused surveys of the Project area including a 30-day pre-construction clearance throughout all areas of the Project site and a 500-foot buffer zone, and providing offsite habitat compensation for burrowing owls identified within Project areas proposed for surface disturbance. Implementation of these mitigation measures would reduce the impacts to this species to a less than significant level.

Direct Impacts to Migratory and Nesting Birds. Bird species, such as Le Conte's thrasher and loggerhead shrike, nesting within the Project area during construction activities would be permanently impacted by Project activities. This impact would be reduced to a less than significant level with implementation of the mitigation measures

outlined in Section 6.4.4, including conducting nesting bird clearance surveys during the nesting season and biological monitoring. Additionally, certain features of the Project, once implemented, may provide nesting opportunities for certain birds of prey. Project structures may also provide nesting and foraging habitat for scavenging migratory birds such as the Common Raven.

Elevated Project structures (i.e., transmission line towers) could potentially result in occasional bird collisions. Most recorded bird collisions with ground structures involve species migrating at night during severe weather and/or during conditions with low visibility, colliding with tall guyed television or radio towers/antennas. Although considered possible, bird mortality as a result of collision with Project structures is considered less than significant, as the Project will not use any tall guyed antennas and the Project vicinity is not prone to weather conditions exhibiting low visibility.

Electrocution of large birds of prey by transmission lines has also been well documented in the past. Historically this was a problem resulting from a large bird simultaneously coming in contact with two conductors, or a conductor and a ground. All electrical transmission lines for the VV2 project would be constructed with sufficient clearance between conductors and grounds to protect raptors and other large birds from electrocution. Installation of transmission lines and towers according to the guidelines recommended in the "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006" (APLIC, 2006) also would reduce potential impacts to less than significant.

Direct Impacts to Animal Movement Corridors. Onsite vegetation communities provide habitat for wildlife common to each community. Habitat within impact areas of the Project site would be permanently or temporarily lost as a result of temporary surface disturbance.

Animal movement corridors present with the affected habitats would be disrupted as a result of permanent and temporary surface disturbance and human work activity presence associated with the Project. Although no specific wildlife movement corridors have been identified within the Project area (as to do so would require extensive studies over a period of multiple years), movement corridors are nevertheless expected to occur on the site. The most likely areas that such corridors are expected include onsite drainages, ridgelines, small valleys, and along man-made features (e.g., fences, structures, dirt roads) that direct animals in a certain direction. Wildlife most likely to utilize such corridors include, but are not limited to, the larger predatory species such as the coyote, kit fox, bobcat, striped skunk, and Virginia opossum.

Adjacent non-impacted lands provide viable alternative animal movement habitat for the affected species. Wildlife using the onsite areas would largely be displaced to adjacent

lands as a result of habitat loss resulting from the proposed project. The Project has been designed to avoid all impacts to onsite washes and drainages, which serve as likely wildlife movement corridors. For this reason and due to the availability of adjacent lands for alternative wildlife movement and in addition to mitigation measures required for other impacts (i.e., offsite habitat compensation, habitat restoration), direct impacts to general wildlife and animal movement corridors are considered to be less than significant.

Direct Impacts to Jurisdictional Waters. A total of 55 ephemeral dry washes occur within the Project area. Surface disturbance impacts to these streambeds may be considered significant and would require specific permitting by CDFG under Section 1600 of the California Fish and Game Code for impacts to WCS and by the USACE under Section 404 of the CWA for surface disturbance impacts to WUS exceeding a specific acreage limits. Water Quality Certification and/or waste discharge permitting would also be required by the RWQCB under Section 401 of the CWA, if state waters may be impacted by surface disturbance actions.

Current design plans for implementation of the proposed Project include avoidance of surface disturbance to all state and federal jurisdictional waters. No federal or state waters are located within the proposed footprint of the power plant and the adjacent construction staging areas. Proposed transmission line utility features have been designed to span all state/federal waters and avoid any surface disturbance impacts to these jurisdictional areas. New access roads are planned to avoid all state and federal jurisdictional waters. Existing dirt road will be utilized where present for project-related drainage crossings. Directional boring of the sanitary waste water pipeline under one state jurisdictional waters (Drainage # 1) is planned. No vegetation clearing, grading, digging, placement of fill, or use of culverts are currently planned for any of the 55 jurisdictional drainages located throughout the linear features of the Project.

If it is determined at a later date that the Project cannot avoid surface disturbance activities within state/federal waters, specific permitting as outlined above would be necessary. This would likely entail submission of a USACE Nationwide programmatic permit application, as well as an application for a LRWQCB Water Quality Certification, according to established guidelines. In addition, mitigation as outlined in Section 6.4.4 would be incorporated into these permit applications.

6.4.3.3 Indirect Impacts

Examples of indirect impacts include, but are not limited to, elevated noise levels from construction or operational activities and night lighting. Such impacts also include alteration of surface water elevations, changes of floodplain flow patterns, fugitive dust

generation, increased erosion or sedimentation, runoff of hazardous chemicals or waste, aerial drift of herbicides/pesticides into waters or soils, and/or introduction of non-native species.

Implementation of the Project may lead to indirect impacts to biological resources located in the vicinity the Project area. Indirect impacts are those effects to natural resources supporting biological systems caused by a project action which occur later in time than initial construction/operation actions or those that are removed in distance from the immediate project site. Indirect impacts may be permanent or temporary in nature and may persist following Project construction. They include, but are not limited to:

- Human intrusion into areas not generally subject to this stress;
- Attraction and/or facilitation of human-subsidized scavenger use;
- Temporary and/or permanent increases in ambient night lighting as a result of the use of street, parking lot, and/or building lights;
- Runoff of hazardous materials into adjacent areas;
- Changes in surface drainage patterns following precipitation events (contributing to runoff and sedimentation);
- Temporary and/or permanent noise increases;
- Increases in fugitive dust that may accumulate on offsite plants; and
- The introduction of exotic or invasive plants or animals.

These types of indirect impacts can affect vegetation or alter habitat use by special status species.

Areas adjacent to the proposed Project are occupied by the desert tortoise, burrowing owl, presumably the Mohave ground squirrel, as well as other special status species such as Le Conte's thrasher and loggerhead shrike. Portions of the Project area are located in close proximity to the Mojave River, which supports a variety special status species including, but not limited to the least Bell's vireo, southwestern willow flycatcher, and Mojave River vole. This Mojave River corridor is also an important migratory flyway and nesting/foraging habitat for a wide variety of other species, including birds of prey. The VVWRA facility is also located adjacent, which provides aquatic habitat for a variety of waterfowl, as well as the southwestern pond turtle. Potential indirect impacts to these species are discussed below.

Indirect Impacts to Plant Communities and Special Status Plant Species. Dust generated by construction activities associated with the Project area has the potential to drift offsite and settle on adjacent habitat and vegetation. This would result in minimal adverse effects to plant species.

Indirect Impacts to Special Status Wildlife Species. Implementation of the VV2 Project has the potential to indirectly impact several special status wildlife species. The potential direct impacts to these species are discussed below.

Desert Tortoise

Indirect impacts to desert tortoise may result from a variety of Project-related factors. Construction of the various Project features may serve as barriers or function to inhibit/reduce desert tortoise movement. This would effectively fragment a functioning population**.**

Fugitive dust generated by project construction has the potential to decrease offsite germination of annual plant species, which comprise a large portion of the desert tortoise's diet.

Additional nesting, perching and shade opportunities would be created for the common raven, a scavenging species known to predate hatchling and juvenile desert tortoises. Simple human presence associated with Project operations, in addition to any trash/garbage generated by Project-related activities, would likely attract common ravens to the area as well.

Additional roads and increased traffic created by the Project would result in an increased potential for desert tortoise injury and/or mortality associated with vehicle travel, illegal collection, as well as possibly improve the ability of some desert tortoise predators to secure prey. Other human actions possibly detrimental to desert tortoises, such as garbage dumping and an increased chance of wildfire creation could be created with the addition of roads in this species' habitat.

All of these indirect impacts to the desert tortoise would be reduced to a less than significant level with implementation of mitigation measures, including participating in a federal ESA Section 7 consultation with the USFWS and issuance of a Project BO, obtaining from CDFG a CESA Section 2080.1 concurrence with the Project BO; offsite habitat compensation and impact minimization measures for this species. A detailed discussion of these mitigation measures are provided in Sections 6.4.4.

Indirect Impacts to Migratory and Nesting Birds. Construction activities, such as the operation of heavy equipment, have the potential to generate levels of disturbance adjacent to the Project area.

Indirect impacts to riparian-nesting special status bird species such as southwestern willow flycatcher, least Bell's vireo, and western yellow-billed cuckoo, may occur as a result of

project related activities and loud noises associated with the installation of portions of Segment 1 located in close proximity to riparian areas (i.e., reclaimed water pipeline in the VVWRA treatment facility) if conducted during the breeding season of these species (Feb. 15 – Aug. 31). Mitigation measures outlined in Section 6.4.4 will be implemented to reduce potential impacts to these species to a less than significant level. These include conducting the construction activities for the areas in close proximity to riparian habitats potentially suitable for these species outside the breeding season. Additionally, biological monitoring during construction in these areas would further ensure that impacts do not result.

Various activities, such as the operation of heavy equipment, have the potential to generate levels of disturbance adjacent to the Project area during the initial construction phase. Some bird species may abandon nests if nearby noise levels are excessive. Dust generated by construction activities has the potential to drift off the Project site and settle on adjacent habitats and vegetation. This can result in both adverse plant and insect use effects.

In general, initial Project construction activities would result in temporary reduction of wildlife use on adjacent lands as a result of construction dust, lighting and noise. The latter may also result in a minimal effect on adjacent plants. Wildlife use would be expected to return to pre-construction rates following the completion of construction activities.

Following initial construction activities, Project operations would also generate varying levels of dust, lighting and noise disturbance adjacent to the proposed power plant and on limited occasion, in proximity to utility features. These levels of impacts, often associated with maintenance actions, would be of smaller magnitude than those associated with construction and would be of short duration. A small, less than significant, increase in these impacts would also be anticipated for day-to-day general Project operations.

Indirect Impacts to Animal Movement Corridors. Initial construction activities associated with the VV2 Project would result in a temporary reduction of wildlife use on adjacent lands as a result of noise, dust, and lighting. Wildlife use would be expected to return to pre-construction rates following the completion of construction activities. Wildlife on adjacent lands also may be impacted by light, dust, and noise disturbances associated with maintenance and, to a lesser degree, operations activity of the Project. These impacts would be of smaller magnitude than those associated with construction. Indirect Project impacts to animal movement corridors would be considered less than significant.

Indirect Impacts to Jurisdictional Waters. Potential adverse impacts to adjacent jurisdictional waters and/or the underlying aquifer could result from inadequate controls or

containment of onsite drainage or fluid discharge. Additionally, improperly contained or directed precipitation drainage, as well as uncontrolled fluid discharge, could result in erosion and sedimentation impacts. Appropriate design and implementation of onsite drainage, stormwater, and miscellaneous fluid discharge facilities and procedures, as discussed in Section 2.0, Project Description and 6.17, Water Resources, would mitigate this potential indirect impact to a less than significant level.

6.4.3.4 Cumulative Impacts

Impacts associated with the VV2 Project, when considered individually, may not be considered significant. However, when considered collectively with other past, present, and future projects in the region, these Project impacts contribute incrementally to the loss of habitat or special status species. If the Project's incremental contribution were to be substantial, then the Project may be considered to have significant cumulative impacts.

The City of Victorville, like many other areas of the western Mojave Desert, is a rapidly growing area. As discussed in Section 6.1, SCLA is planned as a major regional cargo distribution center that will involve the conversion of lands in the immediate VV2 Project vicinity from undeveloped to developed and thus reduce available habitat.

Due to the high levels of human activity in the area, habitat loss, degradation, and fragmentation are considered significant issues in the West Mojave Plan. The VV2 Project will contribute to the ongoing conversion of land areas from undeveloped to developed and thus reduce the amount of available habitat for a number of special status species including the desert tortoise, Mohave ground squirrel, and burrowing owl. However, loss of habitat for these species will be mitigated by the requirement for the Project to provide suitable habitat for these species offsite to compensate for the loss of habitat at the Project site. Providing compensation in the form of permanently protected offsite mitigation acreage, combined with other mitigation measures described in Section 6.4.4 to minimize the effects of Project activities on biological resources, will reduce the Project's potential cumulative biological impacts to a level that is less than significant.

6.4.4 Mitigation Measures

The following mitigation measures are recommended to reduce Project impacts to biological resources to levels that are less than significant. Additional detailed descriptions of the mitigation measures are provided in AFC Appendix H.

6.4.4.1 General Mitigation Measures

BIO-1: All work activities would be restricted to specifically approved and clearly marked areas.

BIO-2: A Field Contact Representative (FCR) would be designated to oversee and be responsible for compliance with conditions of Project approval with respect to biological resources. This FCR would be on site or easily accessible during all project activities and would have the authority to halt all project activities that are in violation of conditions of Project approval.

BIO-3: All personnel working during the construction, operation or maintenance of the proposed VV2 Project would be required to attend Environmental Awareness and Project Approval Compliance Training. This training would be presented by a qualified biologist familiar with the Project area and sensitive biological resources.

BIO-4: Personnel working during the construction, operation or maintenance of the proposed VV2 Project would be required to attend an Environmental Awareness and Project Approval Compliance Training. This training would be presented by a qualified biologist familiar with the desert tortoise, Mojave ground squirrel, burrowing owl, and other special status species with potential to occur within the Project area.

6.4.4.2 Species Specific Mitigation Measures

Small-flowered Androstephium, Booth's Evening Primrose, Sagebrush Loeflingia, and Mojave Monkeyflower

BIO-5: Suitable habitat for these species (i.e., washes and drainages) will be avoided, where possible.

BIO-6: Focused surveys for these species will be conducted throughout potentially-suitable areas of the site during the appropriate survey period prior to the start of Project construction;

BIO-7: Clearance surveys and biological monitoring would be conducted throughout all areas of the Project site prior to and during ground disturbance; should any special status plant species be detected during these surveys and monitoring, CDFG would be notified and appropriate action (if any) would be implemented.

Joshua Trees and Native Cacti

BIO-8: Joshua tress and native cacti will be relocated to pre-determined, agency-approved locations, made available to a local adoption program or transplanted per facility landscape design plans and/or used in onsite habitat restoration.

Desert Tortoise

BIO-9: Prior to commencement of ground disturbance at the Project site, all desert tortoises on the site will be translocated by authorized biologists to pre-approved locations and monitored for a period specified by the USFWS and/or CDFG. A translocation plan will be prepared by the Project applicant in conjunction with USFWS and CDFG, and impacts to both translocated tortoises and receiving population tortoises will be fully analyzed and mitigated.

BIO-9: Following issuance of Project approvals and incidental take permitting, construction site clearance, fencing, and monitoring will occur in accordance with the protocol and measures outlined in AFC Appendix H.

BIO-10: Suitable offsite compensation acreage, as required by the applicable regulatory agencies, will be acquired at a location approved by both CDFG and USFWS. These compensation lands would be managed over the long term for the benefit of the desert tortoise.

BIO-6: Desert tortoise habitats temporarily disturbed through Project activities will be revegetated and restored in accordance with the Habitat Restoration measures listed below.

Specific Desert Tortoise impact minimization and animal handling measures are outlined in AFC Appendix H.

Mohave Ground Squirrel

BIO-7: Before initiating ground-disturbing activities, a biologist (Designated Biologist) knowledgeable and experienced in the biology and natural history of the Covered Species would be designated to monitor construction activities in areas of Mohave Ground Squirrel habitat to help avoid the take of individual animals and to minimize habitat disturbance. The CDFG would be notified in writing prior commencement of ground-disturbing activities of the Designated Biologist's name, business address, and telephone number. The Designated Biologist would be subject to the approval by the CDFG. The Designated Biologist would have authority to immediately stop any activity that is not in compliance with the

issued CESA incidental take permit, and to order any reasonable measure to avoid the take of Mohave Ground Squirrel.

If a Mohave Ground Squirrel was found in a burrow during Project-related activities, it would be immediately relocated to a burrow at a protected off-site location approved by the CDFG's Regional Representative**.** The Mohave Ground Squirrel would only be relocated by a qualified biologist to a relocation burrow prepared according to CDFG guidelines.

If a Mohave Ground Squirrel was injured as a result of Project-related activities, it would be immediately taken to a CDFG-approved wildlife rehabilitation facility. Any costs associated with the care or treatment of such injured Mohave Ground Squirrels would be borne by the Project. The CDFG would be notified immediately unless the incident occurred outside of normal business hours. In that event the CDFG would be notified no later than 12:00 noon on the next business day. Notification to the CDFG would be via telephone or email, followed by a written incident report. Agency notification of take would include the date, time, location and circumstances of the incident, and the name of the facility to which the animal was taken. If a Mohave Ground Squirrel was killed by project-related activities during construction, or if a Mohave Ground Squirrel was otherwise found dead, a written report would be sent to the CDFG within two (2) calendar days. The report would include the date, time of the finding or incident, location of the carcass, and the circumstances.

BIO-8: Suitable offsite compensation acreage, as required by the applicable regulatory agencies, will be acquired at a location approved by CDFG. These compensation lands would be managed over the long term for the benefit of the Mohave ground squirrel. An implementation agreement with a mitigation banking and land management entity (e.g., the Desert Tortoise Preserve Committee [DTPC], or a third party entity approved by CDFG) would be secured to acquire replacement habitat, initially enhance this acquired habitat and manage it over the long term for the benefit of the Mohave ground squirrel, subject to CDFG approval

BIO-9: Mojave ground squirrel habitats temporarily disturbed through Project activities will be revegetated and restored in accordance with the Habitat Restoration measures listed below.

Specific Mohave Ground Squirrel impact minimization and animal handling measures are outlined AFC Appendix H.

Burrowing Owl

BIO-10: Preconstruction surveys of suitable habitat at the VV2 Project site would be conducted within a 30-day period prior to construction. If Burrowing Owl is identified onsite, all mitigation measures identified herein would be applied prior to surface disturbance taking place.

For every Burrowing Owl or pair of Burrowing Owls located within a 150-foot buffer area around of any active Project disturbance area during the non-breeding season (September 1 through January 31), offsite habitat compensation for species' impacts would be required, as outlined below.

For every Burrowing Owl or pair of Burrowing Owls located within a 500-foot buffer area around of any active Project disturbance area during the breeding season (February 1 through August 31), offsite habitat compensation for species' impacts would be required, as outlined below.

If Burrowing Owls are discovered within proposed surface disturbance areas of the Project, a minimum of 6.5 acres of foraging habitat per pair or unpaired resident bird would be permanently protected to offset the associated loss of foraging and burrowing habitat. The protected land would be located adjacent to occupied burrowing owl habitat in a locality acceptable to CDFG.

An implementation agreement with the Desert Tortoise Preserve Committee or other agreed-upon third party entity would be secured to acquire 6.5 acres of replacement Burrowing Owl habitat for each pair/unpaired bird, initially enhance this acquired habitat and manage it over the long term for the benefit of the species. Specific burrowing owl impact minimization and animal handling measures are outlined AFC Appendix H.

BIO-11: Burrowing owl habitats temporarily disturbed through Project activities will be revegetated and restored in accordance with the Habitat Restoration measures listed below.

Southwestern Pond Turtle

BIO-12: Construction-related activities in the area along the VVWRA treatment ponds would be confined entirely to existing compacted perimeter roads. Treatment ponds, their embankments, and any and all vegetation communities in this specific area would be avoided by the reclaimed water pipeline installation proposed.

BIO-13: A biological monitor familiar with the species would be present for all activities involving operation of heavy equipment or ground disturbance in this area. The biological monitor would conduct daily clearance surveys along the ROW and vicinity to further ensure that the southwestern pond turtle would not be impacted.

San Diego Coast Horned Lizard

BIO-14: Construction activities would be located outside of washes and drainages, areas where this species is most likely to occur.

BIO-15: A biological monitor familiar with the species would be present for all activities involving operation of heavy equipment or ground disturbance in this area. The biological monitor would conduct daily clearance surveys along the ROW and vicinity to further ensure that the San Diego coast horned lizards are not be impacted. Individual San Diego coast horned lizards be found within the project site would be relocated to offsite areas away from harm.

BIO-1**6**: Upon completion of project activities all temporarily disturbed areas would be revegetated and restored, including the Mojavean juniper woodland and scrub habitat that represents portions of the potentially-suitable habitat for this species on the Project site.

Mojave River Vole

BIO-17: Construction activities would be located outside of washes and drainages along the transmission line ROW within Segment 1 where this species is most likely to occur.

BIO-18: Should the Mojave River vole be found during construction activities on the project site, these animals would be safely relocated to offsite nearby suitable habitat.

El Emigdio Blue Butterfly

BIO-19: Construction activities would be located outside of suitable habitat (i.e., washes and drainages) where this species is most likely to occur.

BIO-20: Upon completion of project activities within the desert saltbush scrub that potentially serves as this species habitat onsite, all temporarily disturbed areas would be revegetated and restored.

Nesting and Migratory Bird Species

BIO-21: Vegetation removal and grading activities occurring during the nesting season (generally Feb.1 through Aug. 31) of bird species potentially nesting on the Project (e.g., Le Conte's Thrasher and loggerhead shrike) would require at least one nesting bird survey (more if deemed necessary) to be conducted by a qualified Biologist. If no nests are found, construction would proceed. If nests are found, impact avoidance measures would be required.

BIO-22: Project activities occurring in close proximity to the Mojave River corridor, such as portions of the linear utility features, would be scheduled to avoid the nesting season (February 15 – August 31) of the southwestern willow flycatcher, least Bell's vireo, western yellow-billed cuckoo, and other special status riparian-nesting species. Biological monitors having experience with these species would be present during operations in these areas to further ensure that impacts to these species do not result. Should it be determined that any of these above-reference species are being impacted or alteration of avian migratory flight patterns be detected, precipitating Project activities would be halted in the area until further impact avoidance measures are determined or for the remainder of the migratory movement.

BIO-23: Common Raven nest removal measures recommended for Desert Tortoise conservation purposes would be conducted in the inactive nesting season with appropriate agency approvals.

Specific nesting and migratory bird impact minimization and animal handling measures are outlined AFC Appendix H.

Jurisdictional Waters

BIO-24: Should permanent impacts to jurisdictional waters of the United States or California become necessary during Project activities, the necessary permits would be obtained and the affected acreage would be replaced to offset the loss of this acreage. Replacement lands would have intact streambed habitat within their perimeter and would be managed for the long-term protection of this resource.

Specific jurisdictional waters impact minimization measures are outlined in AFC Appendix H.

Habitat Restoration

BIO-25: Upon completion of Project construction, areas that were temporarily disturbed by construction activities (e.g., transmission line pulling sites, transmission structure assembly areas, ROWs for buried Project pipelines, construction laydown areas) would be reclaimed, revegetated, and/or restored. Techniques used for these efforts will be subject to approval by the CPM and the applicable resources agencies (e.g., USFWS, CDFG) and/or other involved agencies and may include any or all of the following methods: 1) vertical mulching; 2) raking tracks; 3) imprinting; 4) transplantation of salvaged Joshua trees and cacti; and 5) and hand broadcasting of native seed from locally-collected seed stock.

Specific habitat restoration measures are outlined AFC Appendix H.

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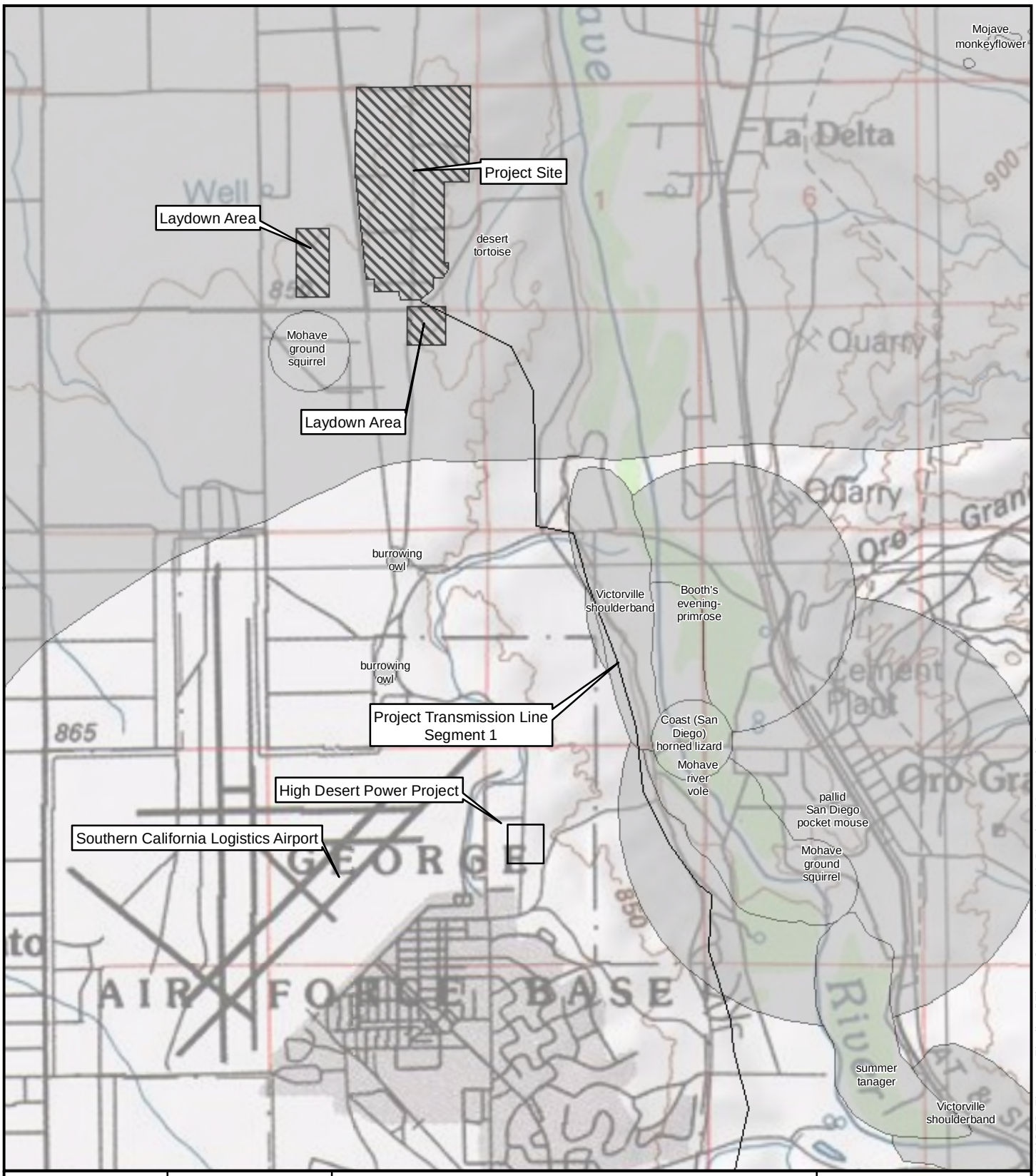

Locus Map

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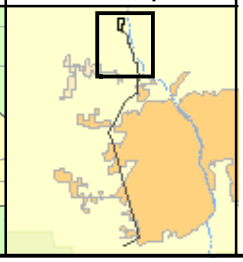

Historical Species Occurence

Victorville 2 Hybrid Power Project

Base Imagery: USGS 100K Topo Quadrangles
Biological resources data developed by AMEC Earth and Environmental, Inc.

Scale: 1:40,000

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Inland Energy, Inc.

ENSR | AECOM

Mapsheet 1 of 3

Figure: 6.4-1

Date: February 2007

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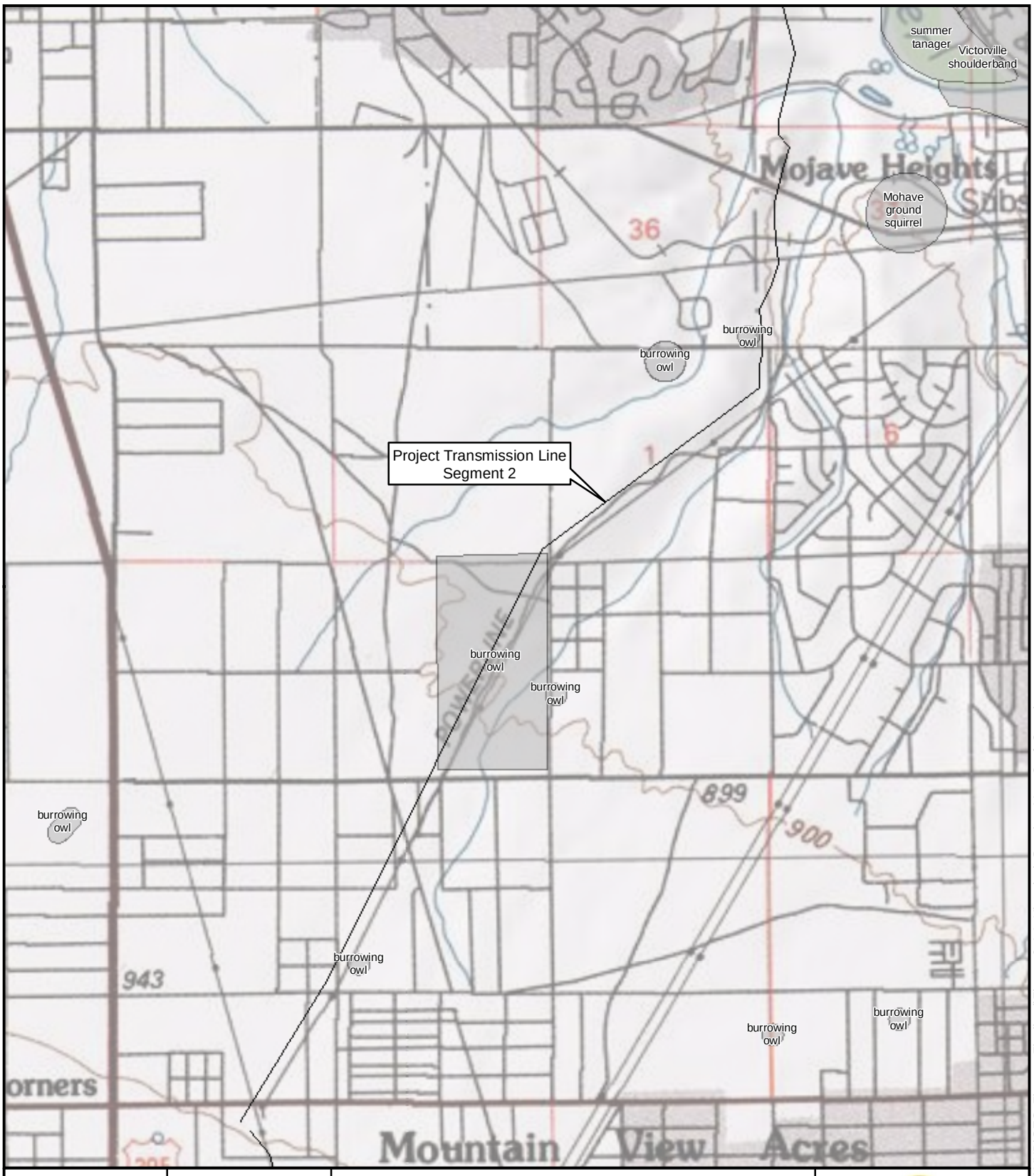

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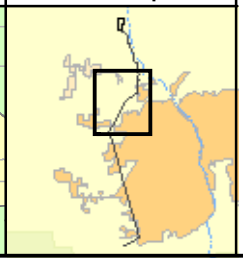

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Mapsheet 2 of 3

Figure: 6.4-1

Date: February 2007

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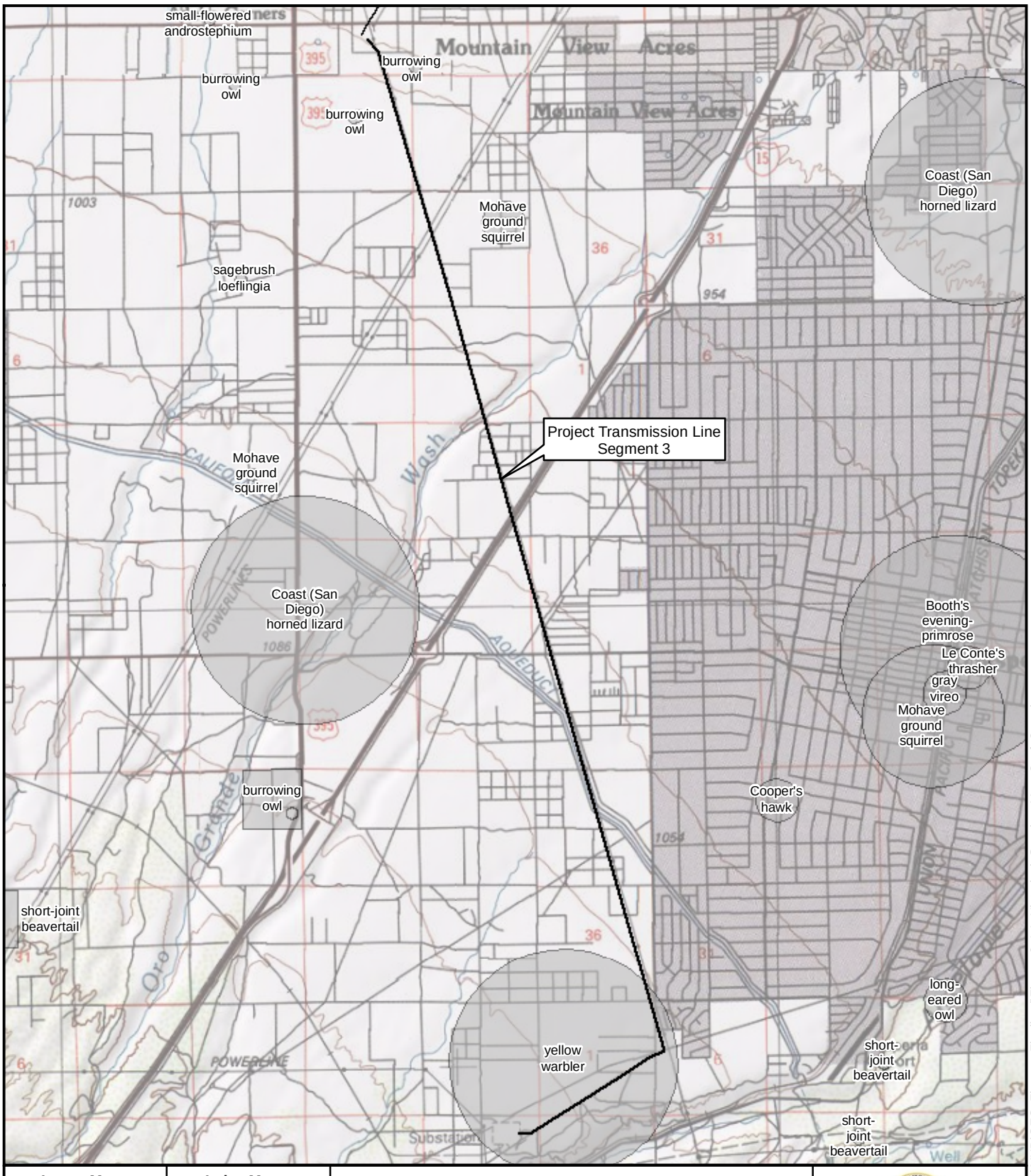

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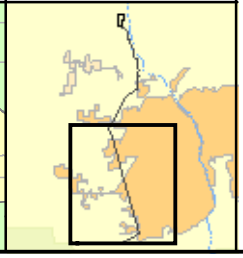

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Mapsheet 3 of 3

Figure: 6.4-1

Date: February 2007

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